THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXIX. NEW YORK, SATURDAY, JULY 6, 1901. NO. 1.

ORIGINAL ARTICLES.

PRACTICAL NOTES RELATIVE TO RABIES

BY N. G. KEIRLE, A.M., M.D.,

OF BALTIMORE;

DIRECTOR OF THE DEPARTMENT FOR THE PREVENTIVE TREATMENT OF RABIES, COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE.

AT what time and under what circumstances should patients be advised to submit to treatment? With what material and in what manner are they treated? What risk attends treatment? If a human being contracts rabies, he inevitably dies. There are no verified cases of recovery. Three cases are recorded in which general paralysis developed during treatment. They all recovered. In one case, the treatment was not discontinued. Whether these were cases of paralytic rabies cured by treatment is a question regarding which a consensus of opinion has not been attained. Treatment should be resorted to as soon as possible. Delay is not only dangerous, but may be deadly. A physician consulted me regarding a bite upon his hand. He had already delayed ten days, awaiting the result of an inoculation experiment. He was advised to take treatment without further delay, but failed to do so. He developed rabies about as soon as the inoculated animals. Two patients were advised to submit to treatment at once. They refused, stating they would await the result of the inoculation experiment. Rabies developed almost simultaneously in both the experiment and patients. However, a number, though not treated, escape. An example of this was a child bitten severely on both arms. The dog had been experimentally demonstrated rabid.

As to risk, there is none greater than the rare and unjustifiable occurrence of abscesses. Lumps caused by proliferation of connective-tissue corpuscles are common, as is also a local or general erythema. The length of time of treatment should not be less than twenty-three days. If very severely bitten, and there is persistent induration about the wounds, it is advisable to continue treatment off and on until the induration subsides. Unless it is certain that rabies is absent, those exposed should not be held pending investigation. The affirmative result of the morbid histology, or experimental inoculation, is a demonstrated certainty. If there is a suspicion of rabies, the patient should be given the benefit of the doubt and should be treated without delay.

If the biting animal can be securely kept, it is a mistake to kill it. Treat the patient and observe the animal. If after a few days it is evidently in sound health, the treatment may be stopped. A lady seeking her stray dog visited a pound. She did not find her dog, but the good and amiable points of another dog were pointed out to her, to observe which she had to stoop over the animal, whereupon it seized and severely lacerated her lip with its teeth. This being a very dangerous situation for such wounds, she was treated at once and the dog visited for four days. It became evident that it was merely a vicious brute, and treatment was discontinued.

This question is frequently asked: What kind of serum is used in treatment? It is not serum. There is no serum antitoxin analogous to that of diphtheria. The therapeutic material used is a portion of the spinal cord of a rabbit that has died of rabies. This is rubbed up in sterile cool water. These spinal cords have been dried over caustic potash which diminishes the amount of virus, but does not attenuate it. The virus is in a condition termed fixed (*virus fixe*). This is a virus which, inoculated subdurally in a rabbit, causes rabies after six days. Before it attains this condition of fixation, it is necessary to inoculate from rabbit to rabbit until it has passed through about fifty. In the first inoculation, rabies does not develop until the completion of eleven, twelve or fifteen days. The medulla oblongata is used in the inoculations of animals. Prior to experience it seems rash to inject a deadly virus into a human body. Pasteur demonstrated its harmless efficacy. The immense gulf between scientific audacity and foolhardiness had been securely bridged with experiments. The method of treatment is subcutaneous hypodermic injections. For convenience, the abdominal region is selected.

Among fanciful methods of treatment, there is the madstone. If it adheres virus is present; if it becomes coated with green, there is virus extracted; perhaps this really is the green pus organism. Raw livers of rabid dogs have been fed to patients. The brains of rabid rabbits have been suggested as therapeutic food.

In India the entrails of an insect are administered, which causes bloody purgation. The patient is also exposed to the heat of the sun. This remedy caused bloody dejections in an inoculated rabbit, but it in no way modified the fatal result.

Bile renders the rabic virus inert, but this mixture fails to confer immunity. The destruction of virulence probably is due to cholic acid (M. H. Valée, of Toulouse, *Annales de l'Institut Pasteur*, June, 1899). Out of the body rabic virus is sterilized at a temperature of 108° F., which is the normal temperature of a hen. In this fowl, when subdurally inoculated, the disease runs a protracted course, and its medulla oblongata becomes inert, sterile. The temperature of a living, inoculated rabbit may be artificially raised until

it reaches 110° F. in its medulla oblongata, but the virus is in no degree modified by this heat, which cannot be endured, but speedily kills. The time is too short for sterilization. The temperature in the human medulla oblongata may be raised to 106° F. by exposure of the individual to dry heat of 180° F., which cannot long be safely endured, nor would it sterilize.

In the nervous system, a morbid histology in rabies is evident, but it is not absolutely pathognomic of the disease. It may be also present in other diseases, which, however, are uncommon in those animals in which rabies is common. In the *Annales de l'Institut Pasteur,* M. V. Babes of Bucharest, in April, 1892, described, in the medulla oblongata and cord, pallor of cell protoplasm, vacuolation, pigmentation and nuclear division, hyaline degeneration of nerve-sheaths and vessels and small-cell exudate. An interesting and characteristic change is observable in the histology of the ganglia, especially the intervertebral. Pathology in this country is indebted to Drs. Ravenel and McCarthy of the University of Pennsylvania for a most instructive exposition of these changes (Rapid Diagnosis of Rabies, *University Medical Magazine,* Phila., January, 1901), which consist in the breaking up of the cells bordering the capsules of the nerve-cells, which themselves are overlaid by these dispersed neuroglia cells. In many parts, the nerve-cells have disappeared. The section is bestrown with small cells.

With such histology, rabies is almost surely present. Without it, rabies is almost surely absent. In either case, treatment should be given. Absolute certainty at present is an unattainable desideratum.

In the preparation of the cords and in the treatment of patients, the technic of the Institut Pasteur, Paris, has been strictly adhered to, from which methods there are deviations. Of these the attempt to preserve cords and their virus in glycerin is very unreliable. If the glycerin is neutral and remains so, the cord may retain its virulence; but, if the glycerin undergoes change, especially if it become acid (which it is liable to do), the virus will be destroyed, and the cord rendered sterile, inert, useless.

ACTINOTHERAPY IN CUTANEOUS MEDICINE, A PRELIMINARY COMMUNICATION.[1]

BY WILLIAM S. GOTTHEIL, M.D.,
OF NEW YORK.

THE employment of light as a therapeutic agent is no new thing in medicine. The best term to employ for this method of treatment in general is phototherapy. The use of that especial form the discovery of which has immortalized the name of Röntgen is generally known as radiotherapy. Actinotherapy seems to be the most suitable designation for the employment of ordinary sun or arc light, or portions of their rays. It is to this latter that I desire to call attention.

[1] Read before the Section on Cutaneous Medicine of the American Medical Association, St. Paul, June 3, 1901.

To go no further back than the time of General Pleasanton, most of us recollect the "blue glass craze" that then swept over the land. Wonderful therapeutic results were attributed to its use; and isolated specimens of the blue glass panes that then appeared in so many southern windows may still be seen. But Pleasanton and his followers truly saw "as through a glass, darkly"; their method was not only empirical, but was developed largely by persons who had no medical knowledge; and it never, therefore, obtained the general recognition of the profession.

The bactericidal action of light is now a well-known and established fact. Cultures of many virulent and pathogenic microbes die in a short time when exposed to properly concentrated light. Axel. L. Larsen[1] has lately gone over the ground again with the pus organisms, the colon and typhoid bacilli, etc., and has endeavored to ascertain the time required to weaken and destroy them with given concentrations of light. But this is by no means its only action and probably not even its chief one. Light irritates the cutaneous nerves, and so affects the central nervous system. It increases the oxidation processes in the cells and the amount of hemaglobin in the blood. This heightened tissue metamorphosis is possibly the factor on which its future therapeutic application will be based. The ordinary phenomena of transillumination show that light penetrates the skin. Contact photographs have repeatedly been made by means of light that has passed through the human body, notably by Kime of Fort Dodge and H. L. Mason of New York. Glass tubes containing sensitive silver salts have been introduced under the skin of animals and have shown the characteristic effects of light penetration on removal.

To Neils R. Finsen of Copenhagen, however, belongs the credit of developing the light treatment and placing it upon a scientific basis. Since he recorded the good effects which he had gotten in variola from the employment of red light several years ago, he has been an indefatigable worker in this field; and to-day his Actinotherapeutic Institute in Copenhagen has a world-wide reputation and enjoys the active support of the Danish Government.

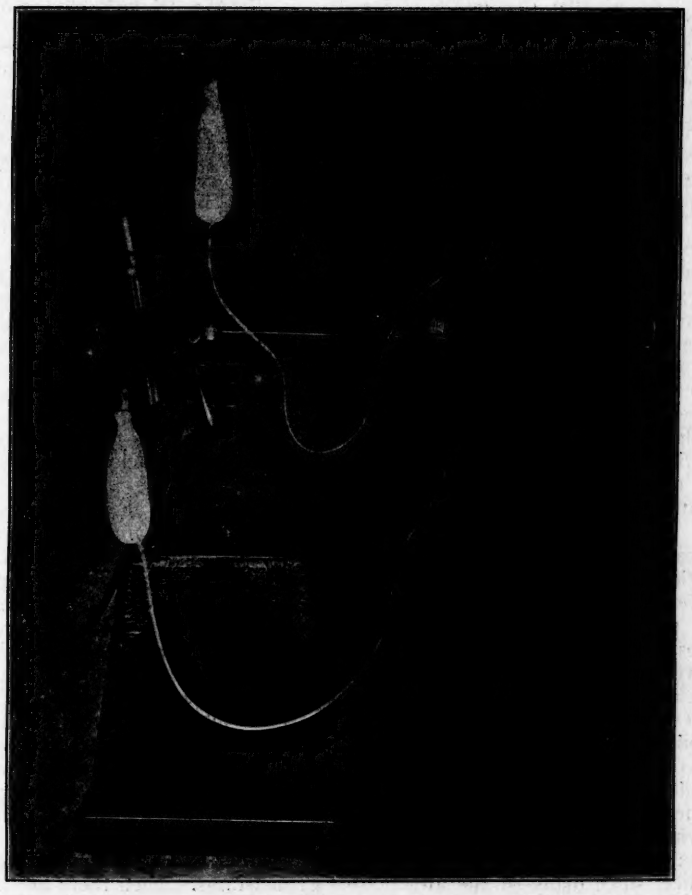
I shall leave out of account, as foreign to the object of this preliminary paper, the work that has been done in other than dermatological fields with the new treatment, or an account of the various forms of apparatus that are employed. Suffice it to say that Helm[2], Gerson[3], Morris[4], and Finsen, Bie, and their collaborators have employed it in many varied dermatoses with a large proportion of good results. Besides lupus and the various dermal tuberculoses, in which it is possibly destined to be the treatment *par excellence*, it has been used in lupus erythematosus, psoriasis, epithelioma, acne vulgaris, rosacea,

[1] Mittheilungen aus Finsens Medicinske Lysinstitut, 1900.
[2] Deutsche Medicinal-Zeitung, No. 10, 1900.
[3] Archiv für Lichttherapie, Vol I., No. 3.
[4] British Journal of Dermatology, August, 1900.

alopecia areata, eczema, ringworm, contagious impetigo, and various ulcerations with success.

Either sunlight or the electric arc can be employed, but the former is too uncertain in most parts of our country to be relied upon. The chemical or actinic rays of the more refrangible end of the spectrum are the elements from which therapeutic effects may be expected, and we have fortunately in the electric arc a source of light which is accessible in all our large centers at any time, and which is especially rich in them. Sunlight is cheaper, of course, but it is only in regions like California or New Mexico, where it would have to be relegated to institutions where the necessary elaborate arrangements for the simultaneous treatment of a number of patients could be made. Increase of the amperage employed and reflection and concentration of all the available rays upon the area to be treated have enabled me already to reduce it very materially, and I have no doubt that further progress in that direction will very shortly be made. I now give half-hourly sittings every other day. The question is solely one of actinic light intensity.

I employ the instrument manufactured by Kliegl Brothers, of this city, and called by them



The Actinolyte.

can be relied upon for any great part of the year, that the expense of installing a sunlight apparatus would be warranted. The arc light can be employed on cloudy days, or in the evening; and this leads me to mention and dispose of one apparent disadvantage of the process. The actinotherapeutic treatment takes time; of that there can be no doubt. But I am convinced that it does not even now require the hourly sessions every day which Finsen gives his patients. Were that the case, no matter what its advantages, it

the actinolyte. It consists essentially of an arc light with the necessary arrangements for automatic action, enclosed in an iron hood. In the hood in front of the arc is a double convex condenser, adjustable for focussing purposes by means of a rack and pinion. On rods that project in front from each side of the hood is a double convex focussing lens, also adjustable. By means of these condensers a circle of light of any size can be readily obtained; of course, the smaller it is the more intense is the illumination. The

hood is swung in such a way that it can be raised or lowered, or swung laterally or vertically, thus making it possible to project the light spot with exactitude upon the area that is to be treated. On the front bars and between the hood and focussing lens is a cell for the purpose of containing the fluid to cut off the heat rays. This can be filled with distilled water or methylene blue or alum solution; or it may be connected with the two water-bags for which arrangement is made so that a continuous stream of heat-absorbing fluid may flow through the cell. So far I have found plain cold water without continuous flow quite sufficient to prevent any unpleasant heat effects from the concentrated light. The base of the instrument contains a suitable rheostat, with a selector on top. Either the continuous or the alternating current may be employed and from 25 to 55 amperes of current can be used. The candle-power obtained varies, of course, with the amperage. With a concentrated circle of light it runs from 20,000 to 60,000.

I am not prepared as yet to make a definite statement of the results obtained with the treatment save in two cases. In one patient with extensive lupus vulgaris they promise to be brilliant. The only area that has been treated, some two inches square, presents a marked contrast to the other locations where the disease is progressing. It is almost white, only two or three lupoid nodules remain, and they are disappearing. And this has been accomplished without ulceration, or even inflammation; the process has been entirely one of interstitial absorption. All the other areas are characteristically infiltrated and scaling. The patient has had absolutely no other treatment.

The second case is one of obstinate tertiary syphilitic ulceration of the leg. The light has apparently had a very good effect in stimulating the indolent glazed ulcer, so that it is now nearly healed, after resisting other internal and local treatment for weeks.

Now as to the advantages of the method. First and foremost it is eminently conservative. It causes no radiodermatitis, ulceration, or loss of hair, such as too often, though sometimes necessarily, occur under the Röntgen treatment. I do not know of the record of any serious trouble from its employment. Finsen rightly lays stress upon this point; and to dermatologists it is of special importance, since many of the affections that they are called upon to treat occur upon the face. In the second place it is entirely painless. This is a great desideratum, more especially in dealing with women and children. Third, it is effective. Now as the method is, there is already concurrent testimony from a sufficient number of competent observers to demonstrate that we possess a powerful therapeutic agent in concentrated light.

Leaving to others the study of the effects of actinotherapy in the general conditions and affections of the internal organs in which it may prove useful, it is to be presumed that by dermatologists it may be employed in the various skin affections which are dependent upon micro-organic or parasitic infection, or where increased tissue metamorphosis is a desideratum. Lupus vulgaris, lupus erythematosus, mycotic eczema, trichophytosis, favus, impetigo, furunculosis, tuberculosis cutis, epithelioma, mycosis fungoides, blastomycosis, actinomycosis, and similar affections are the diseases in which it is likely to prove useful.

144 West Forty-eight Street.

IDEALS IN PHYSICAL EDUCATION.

BY D. A. SARGENT, M.D.,
OF CAMBRIDGE, MASS.

IN reviewing the achievements of the past century in physical education we cannot help being deeply impressed with the substantial progress that has been made. You are all familiar with the general history of the subject, in this country at least, and I will not take your time this morning in enumerating dates, or recounting the epochs and events that have marked the successive stages in the advancement of our cause. My purpose is rather to take up the status of our work (physical education) at the present time, to consider some of the drifts and tendencies that are shaping its course, to make a critical review of some of the evils that beset us, and then see if we cannot find some common ideals towards the realization of which we may direct our energies.

In considering the present status of physical training in the United States we find it established in some form or other in 270 colleges and universities—98 are doing organized work, 72 require physical exercise and 24 give credit for it in the course which counts for a diploma. About 300 cities have introduced physical exercises into the public schools, and 100 of them have special teachers. There are about 500 Y. M. C. A. gymnasiums in different parts of the country, with a corps of some 300 physical directors and 80,000 members. The North American Turnerbund has some 300 gymnasiums and about 200 instructors and some 45,000 members. There are perhaps 100 athletic club gymnasiums of one description or another and a few out-of-door and public city gymnasiums. Then there are many gymnasiums in private houses, churches, hospitals, sanitariums, army and navy depots, police quarters, engine-house stations, mission houses, industrial schools and many other institutions to the number of several hundred. In addition to this form of physical training there are a great variety of special athletic clubs for boxing, fencing, bowling, boating, canoeing, swimming, bicycling, etc. Then there is golf, tennis, baseball, football, with their ardent devotees and numerous following, together with the more passive forms of exercise such as riding, sailing, driving, etc., which have many admirers.

Taking all the sports, games and well-established forms of exercises into consideration, it is safe to affirm that they represent millions in capital invested and affect the lives of millions of our people. The amount of money which a people are willing to spend in the furtherance of a movement is a pretty good indication of its value in their estimation, though if judged from an educational point of view this value would probably be considerably discounted. If we were to estimate the value of the century's efforts in physical training by the effects produced, the problem would be a difficult one on account of the many factors involved, and the increasing number of influences that tend to neutralize all the good effects that might be derived from systematic physical exercise. Those of us who are engaged in making physical examinations know the effects which the practice of special forms of exercise have upon the individual, and it is fair to presume that the same exercises practised by many people will tend to have similar effects. Thus, when a great popular interest sweeps over the country for bicycling, lawn tennis, golf, boxing, or football, the tendency will be to produce among the masses the same mental and physical characteristics that are recognized in the individual devotees of these popular pastimes. It is hardly necessary for me to dwell at this time upon the special effects of these forms of exercise for you are all more or less familiar with them. No one would be regarded as perfect from a mental, moral, or physical point of view, and yet they have produced a most profound effect upon our people. Bicycling, lawn tennis, and golf have been especially valuable to our women, inducing many to exercise who never exercised before. These three sports have probably done more to overcome the evils of tight clothing than a whole century of preaching and lecturing on this subject. Boxing, football, basketball and other antagonistic games have done a great deal to lessen the evils of over refinement and excessive sentimentality, and they may be conducted in such a way as to develop a firm character and a manly spirit. But there are certain inclinations connected with the development of competitive sports and antagonistic games that are not only detrimental to physical training in its best sense, but are also demoralizing to our youth and to the public in general.

Let us consider some of these drifts and tendencies. Thirty years ago amateur baseball was at its height in America, and there were well-organized clubs in nearly every city in the Union. To-day there are a very few amateur baseball clubs outside of the colleges, and the interest in this once popular sport is declining in our institutions of learning. Professional baseball has superseded amateur baseball in popular interest, and although the game is just as beneficial from a physical and recreative point of view as ever it does not have anything like the following it once had. The interest in college boating culminated in 1875, when thirteen crews were represented at Saratoga. In some colleges this sport has been abandoned altogether. In a few institutions it has been re-established, and in some, especially at Harvard, there is a great revival of interest in boating, as many as twenty eight-oared crews being on the river at one time. The practice of archery was quite generally established in this country in the early seventies, and there were numerous clubs of both sexes that rallied around this form of recreative exercise. The interest culminated in 1879 and at the present time there are few archery clubs in existence. The so-called higher gymnastics attained their greatest prominence in the colleges and city gymnasiums in the early seventies. Boxing and wrestling contests attained their greatest popularity at Harvard in 1883, '84 and '85 and are now practically abandoned, although there are two instructors in boxing regularly employed at the gymnasium. The interest in lacrosse and cricket has waxed and waned, but the games have never been entirely abandoned. Field and track athletics have a strong following in the vicinity of New York, Boston and Philadelphia, but attract small audiences and little attention in the colleges and other communities compared to what they did a few years ago. The great city athletic clubs, which once fostered track and field athletics, now seldom have any representatives from their own membership in the public contests, and confine their attention to exploiting the athletic abilities of outsiders for the entertainment of their regular members. Some of these athletic clubs, notably the Boston, act as patrons for school and college athletes, and do a great deal to encourage the practice of out-of-door sports and systematic exercise among their junior members. Many of these city athletic clubs, like the Orange of New Jersey, Washington, Detroit, St. Louis, Providence, Pastime in Brooklyn, Manhattan in New York, Staten Island, Fitchburg, Nationals, Louisville, Philadelphia, etc., have been given up entirely or turned into social clubs.

Notwithstanding the rise and decline of interest in many of the popular sports and exercises, there never was a time in our history when so much attention was given to sports in general as at the present day. As the interest in archery, roller-skating and croquet and boating declines, the interest in bowling, bicycling, golf, canoeing or some other sport increases. Then again, the interest in certain sports, although less intense, may in reality be very widespread and be participated in by a great many people.

Now the important question is, what are the factors which cause some sports to decline and others to be perpetuated in popular favor? In answer to this question we are forced to admit that fashion plays a very prominent part, bringing into vogue at one time sports which have but few valuable features, and sweeping away at another time exercises of the greatest importance. Some of the special forms of exercise like archery, fencing, Delsarte, etc., may be taken up as society fads, and be rushed for a few seasons and

then become obsolete. Even the more serious forms of exercise are sometimes taken up by society because they are thought to be the "proper thing," without regard to their hygienic or educational value. In fact, I should be rather loth to admit to this semi-scientific association how much of our work is without scientific or artistic value, because it is governed so largely by fashion and caprice. Again the spirit of emulation and competition which we try so hard to foster and cultivate has its limitations, and it is a serious question just how far it can be carried without detriment to the cause we are striving to advance. A high spirit of emulation breeds rivalries and enmities and often stirs up bad blood and leads to the establishment of more or less permanent factions which may work great harm to a school or club. This is especially likely to be the case where competitions are confined to members of the club or to the different classes of a school or college. What discussions upon religion and politics are to social clubs, so are athletic contests to athletic clubs if the contests are limited to members. The hardest struggles on the athletic field are frequently between classes or members of the same institution for positions on class or university teams. The feelings of bitterness and enmity often engendered by these hard contests in schools and colleges are softened and assuaged by the thought that knocks, strains and bruises must be endured in practice in order to enable the chosen school, college or university team to vanquish its rival from some other school, college or university. In this way a feeling of unity and solidarity is often established in an institution, which might otherwise be broken up by feuds and dissentions. It is the lack of this feeling of unity on the part of the city athletic club, and the unwillingness of its members to endure the hardships of training for the severer, yet only contests which the other members care to see, which makes these clubs after a few years fall apart simply from lack of any common interest to bind them together.

Another disrupting influence is the establishment of too high a standard. This is one of the evils of professionalism, and really marks the underlying difficulty of settling who is and who is not an amateur. The poorest professional must be a better performer than the best amateur in order to constitute himself a professional and be able to receive money for his services. But the receiving of money is a secondary consideration which follows the presumption of superior merit. This results from long and persistent practice or training such as a person is obliged to undergo in preparing for a life's profession or occupation. When therefore students, clerks and young men who work with their brains rather than with their muscles are urged to practise certain exercises or sports as a means of improving their health and physique, and are offered prizes or trophies of victory as incentive for them to train and compete, one of the first essentials of a fair contest is to see that those who entered the competition are of the same class or on somewhere near the same footing. Now, if the contest is in rowing and those who make a business of rowing are allowed to enter, the conditions would be unfair, as students who are engaged in their studies, or clerks with their bookkeeping through the working hours of the day, and who only take up rowing as a recreation or pastime, cannot compete on anything like equal terms with professional oarsmen. It would be just as absurd to expect the professional oarsman to compete on equal terms with the student in solving mathematical problems or with the clerk in bookkeeping or penmanship.

When, however, sports and pastimes are pursued with so much intensity as ends in themselves, rather than as means to an end, and the devotees give so much time to practising them that they haven't time or energy enough left to give to other pursuits, these persons are just as much professionals in the true meaning of that term as they would be if they received money for their services. These are the type of athletes that have been supported and exploited in the past by some of the large city and university athletic clubs. Although they have won prizes for their clubs, I can hardly believe they have won honors, indeed I am sure that this style of athleticism has done great injury to the cause of physical training. First, by placing all the records so high that bona-fide amateurs will find great difficulty in surpassing them; second, by discouraging and literally driving out of existence the smaller clubs that could not afford to follow the same tactics; third, by causing a decline in active interest among the members of these clubs who cannot give the time and attention from their business that will enable them to compete with the performances of star athletes and who, therefore, do not compete at all. As long as the public is content to see the best performances without regard to the status of the competitors, there will always be a tendency towards professionalism which will have to be guarded against by very stringent rules. One of the best ways of meeting this objectionable tendency in school and college athletics is for the authorities to insist that all contestants must not only attend to all of their school and college exercises, but they must give evidence of having done a certain amount of work and attained a certain rank therein. If the school curriculum is what is ought to be, this will insure that the students will not give too much time to their athletics and that the work that they do engage in will tend to give them a sound mind as well as a strong body.

I have dwelt at some length upon this tendency of antagonistic sports and highly competitive games to exterminate themselves, when not properly managed, because I deem it of the greatest importance that this fact should be thoroughly understood. There is no use denying the fact that athletic contests afford a stimulus to effort to a great many boys and young men, and even to girls and young women, which no other forms

of exercise can give. The problem is how to control these sports and yet keep up the interest, how to eliminate the evil and yet preserve the good. We have seen that when the competition was restricted to one class, school or club, hostile factions were formed and bitter rivalries engendered. Much of the hard feeling and enmity that existed between school and college classes years ago, when the practice of hazing was in vogue, were greatly intensified by class contests in football, rope-pulling, cane-rushing, etc. This feeling of enmity between classes is now fortunately a thing of the past in most institutions. I am not so sure, however, that it has not been transferred and even grown to a greater degree of intensity between rival schools and colleges, judging from the nature and tone of many of the alumni speeches that have been made and reported during the past winter. The rivalry in antagonistic games in many of our schools and colleges has now become so fierce and the desire to win has become so overpowering that there is not a little danger that amicable relations between some of these institutions may be overstrained.

One of the great charms to me of our Association meetings is the opportunity presented for seeing those who are engaged in the same work in rival schools and colleges, and in learning from experience instead of hearsay that they are not fiends, ogres or cannibals, but really good-hearted fellows having the same high aims and noble motives as ourselves, though they may have different ways of showing them. When we ask a friend to assume to be an enemy in order that we may arouse our fighting spirit and practise our animal instincts upon him, it is not a little strange that the imaginary attributes which we repeatedly give to him, are after a while difficult to efface. This is especially so if the fancied realism adds so much to our fierceness of attack and defence as to enable us to win a victory. A man instinctively shrinks from falling upon another man's head under the ordinary circumstances of life, but a man so considerate of an opponent's head or person would not make a successful football player. When the papers were filled with denunciations of the West Point cadets for their rough and cruel practices upon under class men, it did not occur to the general public that these are qualities that must necessarily be bred into the man who would become a professional soldier. A much more agreeable way for us to become reconciled to the stern qualities in our young men, especially if we wish to raise an army, is to attribute these rough, cruel and even fiendish qualities to those who happen to be for the time being our enemies. We have all read about the inhuman cruelties of our Southern brethren during the Civil War, the barbarous cruelties of the Spanish soldiers, and the fiendish conduct of the Chinese Boxers and the Filipinos. By attributing diabolical qualities to an opponent we may excuse ourselves for trying "to do him up" or "put him out of the game." These are simply the remnants of primitive characteristics, possessed by our early ancestors, when those who were not members of the tribe were enemies of the tribe, whom it was one's first duty to wound or kill. When rival boxers deliberately try to "knock each other out," and friendly baseball players "spike" a runner, or throw dirt in a baseman's eyes; when the fair devotees of basketball hiss every attempt of the visiting team to make a goal; when grave and dignified professors rush up and down the side lines of the football field shouting, "down him," "kill him," and delicate ladies who but a moment before shrunk from witnessing the "brutal" game, with flushed cheeks and staring eyes wildly shriek their approval, one might reasonably ask if this, also, is not an exhibition of some of the recurrent traits of our barbaric ancestry.

Of course these are exceptional occurrences, but if you have any real doubt as to the passions which are swaying the minds of most of the spectators, as well as the participants, during an exciting football game or boxing match, just watch the faces of the audience during these antagonistic exercises. To be sure there is the joy of victory to the side that wins, there is also the chagrin of defeat to the side that loses, and it is a question if the prolonged depression that follows defeat does not more than offset the temporary pleasure of victory. It is certainly true that the feelings engendered between institutions by violent athletic contests does not tend to unite them, when harmonious relations and unity of spirit seem altogether desirable. We have seen that when athletic contests were confined to the members of different classes in the same institution that the rivalry became intense and the spirit bitter, and that the only way to relieve this tension and hard feeling was to unite in competition against some other institution. As this movement, which has now been in operation for twenty or thirty years in some of our colleges, is beginning to breed the inevitable bitterness of feeling that sometimes finds expression in a phrase that consigns a whole institution to the infernal regions, the question arises whether these rival colleges cannot unite against some common enemy or institution and thus work together in harmony. The union of Harvard and Yale against Oxford and Cambridge in their athletic games in England, and the American team at Paris and at Athens, are illustrations to the point.

In arranging for international contests to take place every four years in which the winners in the intercollegiate contests could be represented, a new interest and a new zest would be given to athletic games, and their real significance might be brought home to our people, for they would soon learn that this was one of the best means of preserving our National Unity. The rivalry that exists between nations is a fundamental one, and is based largely upon differences in race, blood, nurture and environment. There is no natural rivalry between States, cities and institutions in our country founded upon the personal qualities of those who were born, bred and educated there-

in. Would that there were. A city baseball nine or a college athletic team may be made up of representatives of all parts of the country. Whether these men are successful athletes or not will depend largely upon their own superior natural abilities, their previous training, and the way in which they are handled or managed. Why a city, a college or a community should pride itself upon the achievements of a baseball nine or an athletic team which it never produced is one of the things that I have never been able to comprehend. The only justifiable ground upon which any such pride could be based is that these athletic teams represented the return of a system of physical training open to all, in which the victorious athletes had had to fight their way up, step by step, through preliminary contests until they won a place on the boat or university team. And even then the only thing worthy of recognition in these prolonged contests by a great university would be the triumph of better blood, better brains, better hearts, better lungs, better nerves, muscles and tissues. If the totality of these valuable essentials to life, health, happiness and success have not been increased in the college community at large by the influence of athletics, then these much lauded exercises may be considered not only of doubtful value but even of positive injury to an institution of learning. Happily the average physique in our secondary schools and colleges is improving slowly.

At the present day every alumnus rejoices in the athletic victory of his school or college team, because he thinks the public will consider the achievements of this team a fair representation of what his institution is doing for the physical training of its youth. How seldom this is true! In intellectual training all school men are required to come up to a certain minimum standard of excellence before they can enter college, and again before they can receive their diplomas. There is no such incentive to keep the mass of students up to a required physical standard, and the gulf between the lowest and the highest is great indeed. A few years ago the college gymnasium directors, believing that a moderate degree of physical strength was the fundamental basis, not only for all forms of athletics, but for health itself, decided upon a uniform system of strength tests by which to gauge certain functional powers in their respective pupils. The test consisted of an all-round trial of strength of back, legs, arms and chest, in which the sum total of the several trials was to represent the total strength of the individual. After the candidates for all the athletic teams have been chosen, a great many men who desire to have something definite to compete for, are left without any incentive. One object of the college strength test is to furnish an incentive for a large number of men to keep up their physical exercise by giving them an opportunity to record their improvement and compare it with others measured by the same standard.

The method adopted has been in use at some of our colleges for over twenty-two years, and now offers a basis of comparison between two generations and the individual records of over twenty-five thousand persons. In order to encourage a great number to compete every college in the league agrees to send in to the committee a list of its fifty strongest men, and the college having the fifty which makes the largest total wins the highest honors in this contest for the year. Last year Columbia was first on the list, with a total of 59,489.4 points in which each of the fifty men represented averaged 1,157.2 points. Now, the point which I wish to make is that, notwithstanding the high average made by the first fifty representing Columbia and the other colleges in the league, in all probability the average of all the men examined would not be much over 500 points. In other words, fifty per cent. of all the men examined would fail to make a strength test which was equal to half of that surpassed by the first fifty. While if we make comparisons with the individual men who head the list, we find that over half of all those examined fail to make a test equal to one-third of that attained by the leaders. Now these facts emphasize three things, the stimulating effect of a comparative record or contest upon a considerable number of men, the remarkable increase in functional power that can be attained by systematic training, and the large number of college men who never begin to realize one-half of their possibilities in the way of physical improvement.

The great objection to all forms of athletic competitions and strength contests is that after a while, as the standard rises, they are likely to be pursued as ends in themselves, as I have stated before, rather than as means to an end, which is the betterment of the whole organism. But unfortunately this objection is not inseparable from mental contests, and in both instances those men come to the front whose constitutions are best adapted to stand the strain to which they are subjected. By this method of selection our higher schools and colleges are fostering two distinct types. One type devotes itself to the supreme development of the mind, and the other type to the supreme development of the bodv. The latter type is best calculated to survive, because it has to meet certain mental requirements of the faculty. But neither type represents the average student, and yet it is the condition of the average student who shows what our schools and colleges are doing for the country.

The more experience I have in teaching physical training and the more I observe its results, the more I am convinced that the highest ideal for which we should strive is the improvement of the individual man in structure and in function. This was the conclusion that I came to some twenty-five years ago, and time and experience have given it confirmation. With this ideal in mind all the diverse forms of exercise and games, all fads and specialties, all methods and systems may be weighed in the balance and credited for what they are really worth. For it is not

a runner, a jumper, a boxer, a ball-player, an oarsman or a gymnast that we are trying to produce, but the highest type of a physically perfect man. This forbids excessive development in any one direction, which specialists are constantly striving to attain. It also makes overexercise and overtraining inconsistent with the object in view. It furnishes a constant incentive to well-directed efforts and right methods of living. It is not necessary to hunt for a competitor, for one is always in competition with himself, endeavoring to make his condition to-day better than it was yesterday and so on from week to week and from month to month. If one wants an opponent, he accepts him as a friend. For, as Burke says, "He that wrestles with us strengthens our nerves and sharpens our skill. Our antagonist is our helper." The great thing to be desired and attained is that prime physical condition called fitness—fitness for work, fitness for play, fitness for anything a man may be called upon to do. Is not this a condition worth striving for? How few of us realize the dignity and importance of the work in which we are engaged. Trying to assist Nature in developing and perfecting her handiwork, not simply mending bones, patching wounds and relieving functional disturbances, but trying to lift man on to a higher plane of living, by improving the structure of his bones, muscles, nerves and tissues, and increasing the functional capacity of his whole organism. This is the highest kind of constructive work, in which the building of all other material structures sinks into utter insignificance. If there are those among you who sometimes get disheartened and discouraged because you think your particular branch of service is not appreciated, I trust you will let this ideal take possession of you.

Drink into your very soul, the true aims and noble purposes of your profession. Then if you do not feel inspired to go on with your glorious work with renewed courage and greater energy, you are not made of the stuff of which good teachers of physical training are made. If you do become possessed of the true ideals all of your work will assume a new significance to you. Balls, bats, wands, Indian clubs, dumbbells, chest-weights, ropes, ladders, bars, and all the apparatus of the gymnasium will take on a new importance.

Free exercises, dancing steps, plays, games and "sleights of art and feats of strength," even the schoolboy's "stunts," all will be brought under tribute and made to aid you in getting hold of some indifferent soul, and inducing him to make efforts for himself. All criticism against childish sports, trivial plays and undignified movements and exercises will be simply laughed to scorn, for what dignity has any movement or exercise except the dignity of the mind that directs it? Something of this spirit must have possessed the minds of Agesilaus and Socrates of old, who did not disdain to practise the child's play of "riding a stick" for exercise.

It is the same spirit that induces many over-brain-worked business and professional men, many closely confined clerks and shop girls, to take regular systematic exercise at their homes or boarding-places, when golf, tennis, the bicycle and the gymnasium are inaccessible. And I regret to say that it is a lack of this spirit that puts so many of our college athletes out of condition after they have entered upon their life's work. Finding no opportunity to practise their favorite sport, they find no incentive for exercise of any kind, and frequently break down in health for the want of it. There are scores of such men in New York to-day, and their early breakdown is not unfrequently attributed to overindulgence in college athletics. In some instances this may be true, but the fundamental weakness in the whole athletic movement at the present time is a failure to recognize the primary objects for which athletic exercises are fostered and encouraged—in other words, a failure to recognize proper standards and high ideals. In consequence of this difference of aim and motive many of us are kept busy protecting students against the excesses of some form of athletics while in college, and defending athletics against the attacks of some students after they leave college. If, therefore, we would preserve exciting games and competitive exercises as a part of our stock and trade as a means of physical development, we must be constantly on our guard to detect abuses and withstrain excesses. If, on the other hand, we would avail ourselves of the many excellent exercises which from their nature are not likely to be carried to excess, we must never weary of our efforts to arouse in our pupils an ambition and incentive to try them for the development of their own better selves. This is the vital principle back of all of our work, and if the teachers of physical training will imbibe a little enthusiasm for physical perfection, for its own sake, and put a little of the spirit of helpfulness into their daily work they need never despair of appreciation or employment, for the world is waiting for their efforts. With these ideals in view we may look in the future for the advancement of our cause with reasonable hope and joyous expectation.

THE EARLY OPERATIVE TREATMENT OF ACUTE MASTOID INFLAMMATION.

BY EDWARD B. DENCH, M.D.,

OF NEW YORK;

PROFESSOR OF OTOLOGY IN THE UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE; CONSULTING OTOLOGIST TO ST. LUKE'S HOSPITAL; CONSULTING OTOLOGIST TO THE NEW YORK ORTHOPÆDIC DISPENSARY AND HOSPITAL; ATTENDING AURAL SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY.

AN acute inflammatory process involving the mastoid may occur as a sequel of a severe cold in the head; it may follow one of the exanthemata, or it may be found as a complication of any acute infectious disease. In this later connection the recent epidemics of the grip should be mentioned

as a particular cause of this condition. It is a clinical fact that the aural complications vary decidedly with each epidemic of the grip. During the second year in which this disease was epidemic in this country, mastoid complications were exceedingly frequent. This has also been true in the epidemic of last year, and is true at the present time. It is a somewhat curious clinical fact that during the epidemic of the present year the aural involvement has been probably more severe than in any of the preceding epidemics. In almost every case of acute inflammation of the middle ear which I have seen following the grip there has been some mastoid tenderness. I do not mean by this statement that every case has required operation, but in each instance there has been decided evidence of a congestion of the mastoid very frequently passing into an acute inflammatory process.

The symptoms of mastoid involvement are so well known that they need hardly be mentioned. In the first place, the pain is apt to be severe; there is headache and sleeplessness and, in children, a considerable rise in temperature. I lay stress upon this one symptom in children because in adults temperature is of but little value in determining the presence or absence of any inflammatory process within the mastoid. In some of the most severe cases which I have observed in adults there has been no rise in temperature. While the pain is usually a prominent symptom, it may not be very severe. In adults sleeplessness is one of the most important symptoms, and in any case of middle-ear suppuration where the patient is unable to sleep, although he may not attribute this to pain, it is important to observe carefully the condition of the mastoid. The pain may be so slight that in some cases the patient is able to follow his ordinary vocation complaining simply of slight discomfort in the ear, of an aural discharge and of restlessness or discomfort at night, but of no severe and intense pain. In one case, which I saw in consultation, the patient had not been absent one day from his business, yet on examination I found a perforation through the upper portion of the membrana tympani, sinking of the upper and posterior wall of the external auditory meatus, and tenderness over the mastoid region. Further examination revealed a diffuse, brawny mass in the neck below the tip of the mastoid process. This swelling was tender upon pressure. The aural discharge in this case had been but slight, and the patient had suffered so little discomfort that he was astonished when I told him that immediate operation was necessary. He insisted upon delaying the operation, and as he lived at a considerable distance from New York he was finally operated upon by an eminent colleague in a neighboring city. Less than one week after he came into my office I learned from the family that he had died of acute meningitis, the intracranial involvement having occurred before the operative procedure was undertaken. I narrate this case simply to show the rapidity with which mastoid involvement may occur, and how insidious the advance of the disease may be. Bearing in mind the possible fatal issue in such cases, it seems advisable to urge early operative interference in all cases of acute middle-ear inflammation, and especially in those cases following the grip, or, in fact, any acute infectious disease.

The first step is the early and free incision of the membrana tympani, the incision being extended well out upon the upper and posterior wall of the canal so as to relieve any tension in the mastoid process. Such an incision is best made under general anesthesia, and nitrous oxide is the ideal anesthetic for such an operation. If after an incision of this kind, all tenderness does not subside within a few days I am in favor of opening the mastoid process.

Regarding abortive measures for the relief of inflammation of the mastoid, I can only say that, in my hands, they have proved most unsatisfactory. A few years ago it was my practice, after incising the membrana tympani, to apply either the Leiter ice-coil or the aural ice-bag for a period of from thirty-six to forty-eight hours in all cases in which there was the least evidence of mastoid involvement. Recent experience has taught me, however, that these abortive measures serve to conceal and mask the symptoms of the inflammation without actually relieving it. I think we should be very careful in all cases of this kind about employing measures to abort the inflammation. In many instances I am positive that these abortive measures have simply relieved the pain temporarily, and that the patient has passed from observation only to suffer at a later period from some severe complication of the mastoiditis. In one instance which came under my observation the patient had been treated with apparent success by means of the ice-coil. About six weeks later I operated upon him for tempero-sphenoidal abscess. Although the man ultimately made a complete recovery, I do not believe this complication would have followed had the mastoid been opened when he first came under observation. In a second case, the patient made apparently a complete recovery from an acute mastoiditis under the use of the ice-coil; all tenderness disappeared and all symptoms of mastoid involvement were absent when he left the hospital. Some weeks afterward he again came under observation, and a large epidural abscess was found in the posterior cranial fossa.

Turning now to those cases which are operated upon early, I would say that in no instance have I ever opened the mastoid process without finding considerable destruction of osseous tissue. While attempting to be most conservative in these cases I have always found that I have erred on the side of conservatism—in other words, that it would have been better had I operated at an earlier period. It has never been my experience to find a mastoid in such a condition that I would have been warranted in delaying the operative procedure.

Regarding the use of local blood-letting for

aborting the local inflammation, I believe it is absolutely contra-indicated in all cases. The local abstraction of blood from the mastoid region may temporarily diminish the pain, but I do not believe that in any case it tends to abort the inflammatory process. The symptoms are merely masked and the patient is much more liable to suffer from some serious intracranial complication than if the measure had not been employed.

We now come to the consideration of the symptoms which warrant operative interference upon the mastoid. Of these, local tenderness is, I think, the most constant symptom and the one most to be depended upon. This tenderness is usually found over the region of the antrum. Tenderness at the tip of the mastoid is not, in my experience, as signficant of an inflammation within the osseous structure as is antrum tenderness. As before stated, tip tenderness has been found, in my experience, in almost all cases of acute middle-ear inflammation during the recent grip epidemic. In a large number of these the tenderness has increased, gradually spreading over the mastoid until the antral region was reached. Many of these cases have been operated upon early, and in every instance softened bone has been found, and, in a number, extensive destruction of osseous tissue with an accumulation of pus in the mastoid cells. Some of these cases have yielded to very free incision of the membrana tympani, thus securing free drainage of the middle ear. After incision the ordinary antiseptic irrigation has been employed. The tenderness has, however, been quite slow in disappearing. I mention these facts to show that we cannot depend upon tenderness alone as indicative of mastoid involvement; other symptoms must be present in order to warrant operative interference. In any case, a narrowing of the deep meatus should be regarded as an exceedingly grave sign. If this sign is persistent, and occurs in conjunction with mastoid tenderness, the surgeon is not warranted in delaying the operation.

When we come to consider the dangers of operative interference, we find that under proper antiseptic precautions the dangers from mastoid operations are practically *nil.* It goes without saying that no surgeon should undertake this operation without making the same careful aseptic and antiseptic preparations which he would make for entering the abdominal cavity. The field of operation must be carefully shaved, the parts thoroughly cleansed by scrubbing, and an antiseptic dressing applied for a few hours before the operation whenever this is possible. The external auditory meatus must be thoroughly irrigated with a solution of bichloride of mercury, 1-3,000, and the canal occluded by means of a tampon of iodoform gauze. Both the ear and the field of operation should be completely covered by a moist antiseptic dressing, and this should not be removed until the patient is under the anesthetic. In operating upon these cases I always make it a rule to do a complete operation. I am well aware that some eminent surgeons have made the statement that complete exploration of all the mastoid cells is unnecessary, especially in the so-called influenza cases where we find early involvement of the superficial mastoid cells. Some even go so far as to advise that the antrum shall not be opened unless it is absolutely certain that it is involved. My own experience has been that it is always wise to enter the antrum in every case. A primary mastoiditis is a condition rarely found, and although the superficial cells may contain more pus than those lying deeper, the infection, I believe, must almost invariably come from the middle ear. The reason that in some instances more pus is present in the superficial cells than in the underlying ones is to be found in the varying topography of the mastoid in individual cases. I have found frequently, and especially in my recent operations, that cells very remote from the middle ear may be filled with pus although the remainder of the mastoid may be but slightly involved. For this reason I advocate the performance of a complete and thorough operation in every instance. The entire pneumatic structure of the mastoid must be investigated, the delicate walls of the cells broken down and the operation not considered complete until firm, dense bone is reached in every direction.

As the primary step of the operation, I earnestly advocate opening the antrum and establishing a free communication with the middle ear. The topography of the mastoid varies so greatly in different individuals that unless this is done it is impossible for the operator to thoroughly remove every focus of infection without running the risk of invading some important region—I refer to accidentally entering the middle cranial fossa or the unintentional opening of the lateral sinus. The possibility of such an accident renders strict attention to aseptic technic absolutely necessary. While it is usually possible for the operator to avoid the accidental opening of the lateral sinus, and while he will seldom enter the middle cranial fossa without intending to do so, such accidents may occur even to the most skilful operator. If the aseptic technic has been perfect the result of any accident of this kind will in no way influence the future progress of the case. If on the contrary, absolute cleanliness has not been observed, either accident may be followed by most serious consequences. If a large opening is made into the mastoid, the accidental wounding of the sinus is not a serious matter; the hemorrhage can be controlled with pressure applied with a pad of gauze held by the assistant, and the surgeon can proceed with the operation. If, on the other hand, a small opening is made in the mastoid, and the sinus is accidentally entered, it is impossible to finish the operation and at the same time control the hemorrhage. Again, it should be remembered that, even in cases in which there seems, on examination, to be but slight mastoid involvement, the inflammatory process may have been so extensive as to

have already invaded the lateral sinus, or to have caused a localized infection of the meninges. Under perfect surgical technic the discovery of such a condition enables the surgeon to immediately relieve the patient, while, on the other hand, if the operation is conducted carelessly, the intracranial involvement must be a very serious matter. The possibility of intracranial involvement in even the most acute cases is certainly an argument for thorough and complete operation in every instance. Another reason for making the operation extensive is that the large opening in the bone enables one to determine whether or not any intracranial inflammation is actually present. All softened bone is removed, and each area of softening is followed until firm bone is reached. If this is done, there is no possibility of the surgeon overlooking an extension of the infection to the intracranial structures. If, on the other hand, a small opening is made, and softened bone simply curetted out through this, the parts are not under immediate inspection, and an extension of the inflammation may be overlooked. I remember one case, recently operated upon, in which the patient had only been ill for about eight days, and yet a perforation had occurred through the roof of the *aditus ad antrum* into the middle cranial fossa. It was easy enough to isolate this region in the dressing of the wound and prevent any further infection. Had the mastoid operation been less extensive, however, this opening would certainly have been overlooked, and infection of the meninges might have taken place.

Bearing in mind, then, the rapid course which mastoid involvement may follow, and remembering how quickly infection of the intracranial structures may occur, I am strongly in favor of operating upon these cases very early, and in limiting all measures of abortive treatment to those cases seen in the earliest stage, and in which there is simply a fear that mastoid involvement may occur. When there is well-marked mastoid tenderness, and when there is narrowing of the meatus, I do not believe that it is wise to attempt to abort the inflammation by the local application of cold or by the local abstraction of blood. It is much better to keep the patient perfectly at rest and under observation for a day or two without the use of any abortive measures than to mask the symptoms by external applications. If at the end of twenty-four or forty-eight hours the condition is not changed, the surgeon is certainly warranted in operating upon the mastoid process. An exploratory operation in this region is certainly as justifiable as exploratory laparotomy. At the present day, the surgeon does not wait until he is absolutely certain that a case of appendicitis will not recover without operation; he does not delay until the patient is in a desperate condition, but by early operation prevents the patient's condition from becoming serious. I believe the aural surgeon should adopt exactly the same rules. If a case is doubtful he is fully justified in doing an exploratory operation. If nothing is found, no damage has been done. If this rule is observed I believe that many lives will be saved which would be lost if the abortive plan of treatment is followed.

17 West Forty-Sixth Street.

SALIENT POINTS IN AN EPIDEMIC OF TYPHOID FEVER BASED UPON FIFTY-FIVE CASES.[1]

BY WM. J. CRITTENDEN, M.D.,
OF UNIONVILLE, VA.

IN this paper I do not propose to read a compilation from authors, nor will I quote a long line of statistics. I do not know that it will be of much interest to the other practitioner of medicine, but to the younger practitioner, who is just stepping on the threshold of practice, it is most respectfully dedicated.

During the epidemic of the past year, which it was my privilege as well as my bane to treat, I observed it in the lowlands of our county, on the highest hills, which dot its surface, on the rugged hills of Culpeper, along the meanderings of the smaller streams, as well as along the windings of the beautiful Rapidan. I observed it in the infant, in the woman of sixty years of age, in the adult, and in boys and girls just entering the arena of life, but by far the greater number of cases were between the ages sixteen and twenty-four years, and the greatest mortality between the eighteenth and twenty-second years of age. The sexes were about evenly divided. The epidemic began in July, and continued until the latter part of December, but the greater number of cases occurred during the months of September and of October.

I have neither a North Boston nor a Plymouth outbreak to record, but by observation I have found typhoid fever to be both contagious and infectious, caused by contaminated water, contaminated milk, contaminated vegetables, contaminated food, contaminated apartments, mainly sleeping apartments, and I have found flies to have been frequent carriers of this disease. I have also found that the dejections after having been thrown out and dried would frequently cause the disease. In one case the bacilli were carried by the wind for half a mile or more. Carelessness and want of cleanliness on the part of physicians and nurses are frequently responsible for an outbreak.

I have practised medicine in the Piedmont section of Virginia for the past twelve years, seeing the eruption of typhoid fever but rarely. During the past year, however, it was present in almost every patient. I saw it on the chest, on the abdomen, on the back, on the limbs—in fact, all over the body, even on the face. Therefore my deduction as to the eruption is that it is not present in every case, but during the epidemic of last year it was present in nearly every case, and much more abundant in crowded tenement houses. The hair came out in about one half of

[1] Read before the Medical Society of Virginia.

my patients. In patients suffering from relapses, transverse lines or ridges may be observed running across the finger nail, the number of lines being in proportion to the number of relapses or recrudescences. In one patient recovery was much retarded because of boils, which developed during the eighth week and lasted six weeks. They aggregated the colossal number of 300 and were distributed from the crown of his head to the soles of his feet.

For a variable time, ranging from ten days to three weeks, after the reception of the poison in the system and until its outward manifestation, the patients suffered from lassitude, languor and general malaise. The tongue appearances varied from a light furring to a leathery blackness, in which latter case it would peel off and become dry and glazed. A return to a moist condition marked convalescence. Old writers paid great attention to a quartette of symptoms, namely, nose-bleeding, diarrhea, iliac tenderness and meteorism. In not a single patient did I observe all of these symptoms. Epistaxis occurred in but two patients; looseness of the bowels in about one-half of the number, iliac tenderness in about one-third, while meteorism was present in most. In one of the worst cases that I have ever seen, lasting for more than three months, and followed by post-typhoid mania, none of the typical symptoms were present. In a patient who recently came under my observation the most marked tenderness was over the sigmoid flexure.

Beginning about the middle of the third, or the latter part of the second week, in adults, earlier in children, the most dangerous symptom, intestinal hemorrhage, is to be feared. In the present epidemic it varied in quantity from a few drops to quarts of blood, and the color varied from bright red to tarry black. One patient, a young man, actually bled to death and another patient, a young woman, under the care of a neighboring physician, showed signs of an internal hemorrhage, and at her death a perfect deluge of blood poured forth.

During this epidemic a case came under my care which illustrates our inability to foresee this dangerous symptom. The patient, a young woman, had had typhoid for three weeks, at the end of which time a recrudescence occurred. For four weeks more she went through all the stages of another attack. At the end of this time she showed every sign of convalescence, when a second recrudescence took place, again lasting for four weeks. At the end of the eleventh week her temperature became permanently subnormal. In her thirteenth week she began to convalesce slowly. One significant fact was that during these attacks she would pass masses of necrotic tissue in the stools. At times in this necrotic tissue there would be specks of blood, and at other times there would be an exhaustive hemorrhage. These hemorrhages ranged in quantity from drops to quarts and in color from a bright red to tarry black.

Deep seated ulceration I saw in three cases occurring in young girls. It manifested itself by deep-seated, burning pain in the right iliac region, quick pulse, anxious expression of the countenance, and prostration. But by far the most dangerous complication which can arise is perforation of the bowel. A young man had had typhoid fever for four weeks, but was still walking about. When all at once, he was seized with a severe pain in the abdomen and in the penis; there was a quick, almost imperceptible pulse, anxious expression, pinched features, peritonitis, collapse, a temperature of 109.9° F., and death.

Swelling of the parotid gland, I have observed in one case, which was in a marked relapse. The urine in the early stages is scant, and of high specific gravity; an increase in quantity and lowering of the specific gravity marks convalescence. Bronchitis was present in nearly every patient, and was accompanied by more or less cough. This was relieved by turning the patient frequently. Hypostatic congestion of the lungs was noted in a number of cases of young plethoric boys. It was usually bilateral. Pneumonia, both lobar and lobular, was not infrequent —right here permit me to advise the young practitioner not to rely on subjective symptoms, but to make a physical examination in every case. Laryngitis was found in one patient.

The respiration is increased in frequency during the fever, and during convalescence I have seen it fall to 12 for five or six days. When pneumonia does not exist, I have found that a spasmodic or jerking inspiration is a precursor of coma.

As is well known the pulse is increased in frequency. In a case which came under my care the pulse during the second week of the disease went up to 140, and remained there for three weeks unless controlled by remedial agents. A range from 90 to 120 is common, with a mean range of 100 for many cases. Dicrotism was present in a few cases. In one during convalescence, the pulse dropped to 54 and remained at this rate for over one week. I have found the sudden collapse in typhoid fever due to a myocarditis. I observed thrombosis in two cases. One in the right leg, and one in the left leg.

Pain in the head in the early stages is more or less acute. In some patients the action of the typhoid toxins is expended on the nervous system and the pain is so severe that it resembles meningitis, but on close observation it will be found that meningitis is an exceedingly rare complication. One patient, a young man, observed in 1899 was convalescing from typhoid fever when cerebrospinal meningitis developed, which rapidly proved fatal. Some cases ran the course of the disease without delirium. The delirium amounts only to incoherent answers to questions, or simply a wandering, while with some it is uncontrollable and requires restraint in bed. In one instance a young woman became wild during the first week, the delirium and fever lasted for ten

weeks, at the end of this time both fever and wild delirium left her and she developed post-typhoid insanity from which after some weeks she recovered. Subsultus tendinum was present in a few cases. I find that picking at the bed-clothes is vastly overestimated as a bad symptom. Muscular twitching is extremely common. In one case paralysis of both lower extremities developed. This improved gradually, the anterior tibial group of muscles was the last to react. The so-called typhoid spine of Gibney I have seen in only one case, that of a young woman who has always had some menstrual irregularity.

Three stages of fever were observed, namely, increment, fastigium and decrement. Roughly speaking, the first stage lasted a week; the second, two weeks, and the third, one week. The fever would usually rise, in a step-ladder fashion, for from five to ten days, having the morning fall and the evening rise, and rising higher on each succeeding day to be followed by the stages of decrement, which declined gradually as the patient advanced. In some cases the rise occurs in the morning; there also may be an ambiguous form of fever. The rise may take place morning, noon or night; the temperature may fall to normal, and perhaps during the same day it may rise to 104.5° F. In several cases observed by me the fever seemed to be due to an anemic condition or to nervous phenomena, improvement taking place readily as soon as the patients were allowed to go to the fresh air and take exercise. Sudden falls of temperature take place as the result of hemorrhage.

Mortality.—I lost six cases, as follows: One from perforation of the bowel; one from hemorrhage from the bowels; one from cerebrospinal meningitis; one from abortion; one, a whisky drinker; one from general nervous prostration.

Treatment.—Rest, both mental and physical, is the prime requisite. The patient, as soon as suspicious symptoms declare themselves, should be put to bed in a large, cool, airy room. In the early stages the room should be kept dark, and when convalescence sets in the sunlight should be admitted. The patient should be given repeated doses of calomel until the bowels are moved well. The hair cut close, clipped, or the head shaved, the patient should be made to sleep by such hypnotics as sodium bromide, chloral, a a. gr. x, trional, gr. x, or sulphonal in hot water and in some cases hypodermics of morphine. In some few cases I have found sulphate hyoscyamine in $^1/_{100}$ grain doses to act well. The ice-cap applied to the head will often produce quiet and refreshing sleep.

Reduction of Temperature.—In the early stages, or as late as the middle of the second week, I use cold tub-baths if there is no idiosyncrasy; in the latter case, I use warm water. If the temperature remain high, later in the disease, I find nothing to act better than an ice-bag along the spine, also sponging the patient with ice. An ice-cap to the head relieves the fever, prevents delirium and produces quiet sleep. Sponging with equal parts of water and alcohol fills a good indication. Coal-tar preparations in the reduction of fever I have long since discarded, as I am satisfied that I have done great harm with them.

Antiseptic Treatment.—Of all the antiseptics which I have used internally I have found Watson's chlorine mixture to be the best.

Tonics and Stimulants.—If I were called upon to discard all drugs save one, I would unhesitatingly choose strychnine. I give it in the early stages to prevent cardiac weakness. I give it in the later stages to prevent collapse, to hold my patient up and keep him from dying, and I give it during convalescence as a general tonic and to prevent paralytic troubles. I find that the doses usually given are too small. I have given $^1/_{20}$ grain of nitrate of strychnine every three hours for twenty-one days, to a patient in great danger from cardiac failure, and whenever the dose was lessened or the time lengthened I found great weakness. Nitroglycerin is a quick stimulant to a failing heart, but not permanent like strychnine. Digitalin in $^1/_{60}$ grain doses I found of value in giving the heart rest. A young woman whose heart was beating 140 times a minute, and which kept at that rate unless held down, would be quieted by digitalin and become strong. Turpentine I still find a remedy of great utility in tympanites. In the early stages light wines act well, but later on nothing will take the place of good rye whisky or French brandy. In cases in which neither one can be borne by the stomach, recourse must be had to champagne.

Food.—From the first suspicion of fever until ten or twelve days after all fever has disappeared the diet should be liquid. Milk is one of the most important articles of diet. Care should be taken to see that it is properly digested. If not digested a mixture of acid. hydrochl. dil. and pepsin should be given. Next to milk I find albumin water or raw eggs good. The various animal broths are used with success. In some cases I have found my patients well, but each day there was some rise of fever, the tongue was clean, the abdominal tenderness gone, the appetite and digestion good. In such cases I have allowed my patients to get up and cautiously allowed them solid food, without any unpleasant effects. In connection with food is the frequent and free use of water and ice. Water should be given at regular intervals without the solicitation of the patient.

Treatment of Complications.—These should be treated as they arise, as follows: Hemorrhage. for which my sheet anchor is opium in some of its forms. Tannigen I find good. Injection of water medicated with witch hazel often seem to help. Perforation belongs to the domain of surgery.

Prof. Edmund B. Wilson, of Columbia University, delivered the annual address in Medicine at Yale University, June 25, on "The Higher Claims of Minute Search in Biology and Medicine."

A CASE OF LOBAR PNEUMONIA WITH HYPERPYREXIA; RECOVERY.

BY WM. R. WILLIAMS, M.D.,
OF NEW YORK.

THE rarity of cases of pneumonia with very high temperature at other times than just before death and the difficulty of finding reports of those that do occur perhaps excuse the publication of this note in these columns.

This patient was a well-nourished Italian, twenty-five years of age, who was in the Hudson Street Hospital under my care and later under that of Dr. Conner. He could speak no English so that his previous history remained unfathomable. He was admitted on December 7, 1900, on what was probably the second day of the pneumonia. He had been ailing for four days, but on the day before admission he had a chill and stayed in bed. Throughout the disease the tongue was rather moist and but moderately coated, the stomach behaved very well, although once he vomited after taking milk; constipation was constant. There was severe pain in the left side of the chest upon breathing and coughing, the sputum was rusty and very tenacious. The heart action was much accelerated, but of such force that under stimulation the pulse at no time became alarming. Delirium was pretty constant at night and was present to a moderate degree during the day also. It ceased altogether on the ninth day when the temperature fell.

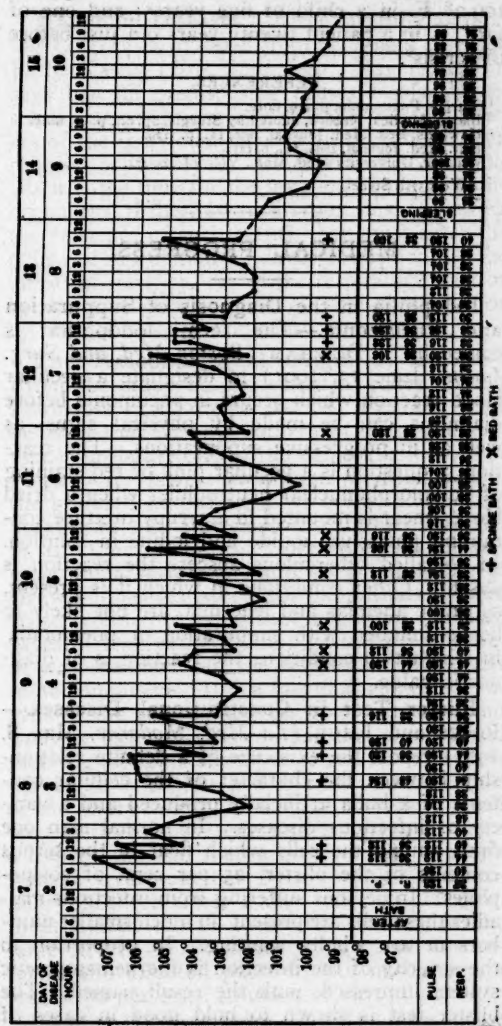
The temperature was taken in the rectum by means of a carefully tested thermometer and there seems to be no reason to doubt the accuracy of the record. The highest point was reached on the second day, 107.4° F. The accompanying chart shows clearly its subsequent meanderings and final subsidence. This chart shows also the respiratory and pulse-rates both before and after the baths.

The urine amounted to from thirty to forty ounces daily, was of a specific gravity of from 1,014 to 1,025. Upon admission it contained 20 per cent. by volume of albumin. This decreased slowly to 10 per cent. on the eighth day, and to a trace of albumin on the twelfth day. Many casts, hyaline and granular, were found during the continuance of the fever and for weeks thereafter. On the twenty-eighth day the urine was free from albumin for the first time and remained normal afterward.

The physical signs were the typical signs of consolidation and of fibrinous pleurisy over the whole of the left lower lobe. The conjunctivæ were distinctly yellowish, but the jaundice was not noticeable elsewhere. During the first two or three days the mucous membrane of lips and mouth was a little cyanotic, but after this the color was good.

From this sketch of the symptoms it will be seen that were it not for the records on the temperature chart the case would not have seemed an unusually grave one, aside from the marked urinary changes.

The treatment besides stimulation with whiskey and strychnine, and nervous sedatives for the delirium and sleeplessness (trional, codeine and morphine), consisted of some form of bathing. Because of our inability to explain to the patient the nature and object of tub-bathing, it was thought inadvisable to use this method. From the fourth to the seventh days inclusive, bed-baths were used. The temperature of the water was 50° F. The bath lasted for ten minutes.



The after-bath temperature and rates of pulse and respiration were taken half an hour after the bath. Before and after the above days the baths consisted of sponging for ten minutes with iced alcohol.

A glance at the chart will show that the temperature rose after the baths at 3 p. m. on the third day, and 9 p. m. on the seventh day, and that it was unchanged after the 6 p. m. bath on the fourth day. Yet, on the whole, the general result of bathing was quite satisfactory.

Notes of other cases of hyperpyrexia in this disease are rather rare in the literature. Fatal cases are reported with high temperatures of from 108° to 110° F. just before death.

Of cases that recovered are one with a temperature of 107° F. with double pneumonia[1]; one of 107.5° F. on the fifth day in a patient sixteen years old[2]; one of 108.4° F. in a boy of eighteen years with jaundice and a double pneumonia[3]; one of 109° F. in a child of three years[4]; one of 109.2° F. in a child of five years[5]; and one of 110° F. in a patient twenty years old just before the crisis[2].

REFERENCES.

[1] Sturgis, Pneumonia, p. 419, note.
[2] Bacon, Medical Record, quoted by Sturgis, op. cit. p. 40, note.
[3] Hawkins, Brit. Med. Journal, 1896, II., p. 1129.
[4] Brit. Med. Journal, 1896, II., p. 1212.
[5] Wagner, University Med. Mag., Vol. VI., p. 471.

152 West 57th Street.

MEDICAL PROGRESS.

Iodophilia in the Diagnosis of Suppuration and Pneumonia.—The term iodophilia is coined by T. DUNHAM (*Boston Med. and Surg. Journ.*, June 13, 1901) to designate a peculiar blood reaction which occurs in pneumonia before diagnosis can be made by physical signs, as well as in progressive suppurations. The reaction in question is a peculiar pink or red staining of polymorphonuclear neutrophiles when a dried blood smear is mounted in a syrupy mixture containing potassium iodide and iodine in solution. In so-called tuberculous abscess the reaction is absent. Other conditions in which it is present, as grave anemias and leucemia, are not likely to be confounded with suppuration or pneumonia in which two conditions the reaction is of diagnostic value.

Blister Test in Constitutional Diseases.—ROGER and JOSUÉ (*La Méd. Moderne*, May 8, 1901) report the existence of a definite relationship between the character of the cellular contents of a bulla artificially produced and a variety of infectious diseases. In normal man one finds among the cells which float in the serous contents of the blister, 25 per cent. of eosinophiles. In persons suffering from infectious maladies these cells are present in much smaller numbers or are wholly wanting. In proportion to the severity of the infection is the hematopoietic system impressed, with the result named. The blister test is shown to hold good in cases of erysipelas, mumps, acute tonsillitis, ophthalmic zona, bronchopneumonia and tuberculosis.

Lobar Localization of Hepatic Function: Its Relation to Abscess Formation.—FRANTZ-GLENARD (*La Méd. Moderne*, May 1, 1901) finds that water injected into the liver by means of the portal vein or hepatic duct does not cause a uniform swelling of the liver, but produces an enlargement and hardening of one lobe while the neighboring lobe remains flaccid. This illustrates an independence of lobar function which must be borne in mind when clinically palpating the diseased liver. Physiologically there are two separate currents within the portal vein: one current consists of blood from the superior mesenteric vein, the other of blood from the splenic and inferior mesenteric, and, while substances injected into the radicles of the superior mesenteric invariably reach the right lobe of the liver, similar injections in the territory of the inferior mesenteric find their way into the left lobe. Autopsy findings agree with these experimental findings. Abscess of the right lobe of the liver due to portal infection may always be traced to intestinal ulceration in the superior mesenteric region; if the left lobe be involved the source of infection lies in the descending colon, sigmoid or rectum.

Intrapelvic Infravaginal Perineorrhaphy.—Plastic operations that deal merely with the "perineal body" are only of cosmetic interest, the superficial muscles which are here attached being too delicate and not properly situated to give any real support to the pelvic floor. As the potential elements of the true pelvic floor of the female, namely, the levator ani muscle and its associated layers of fascia, lie within the pelvic cavity and at least 2.5 centimeters from the skin, they must be approached for proper repair from within the pelvic lumen and beneath the vaginal posterior and lateral walls. GOLDSPOHN (*Am. Jour. of Obstet.* June, 1901) accomplishes this without loss of tissue by first detaching the posterior and lateral vaginal walls for a distance of from 6 to 8 centimeters in the medium line and about half way up on the sides. The two opposing lateral portions of the deep pelvic fascia and levator ani are then by suture brought into direct contact in the medium line in front of the rectum and beneath the vagina; the flap of posterior vaginal wall now lies spontaneously adjusted into longitudinal folds upon the bridge which has been constructed for it. In Emmet's operation, with which this may be compared, there is approximation, but not actual contact of the deep lateral tissues.

Remote Results of Tuberculin Treatment.—CAILLAUD (*La Méd. Moderne*, May 28, 1901), reports the results of tuberculin treatment in five cases of pulmonary terberculosis and two cases of tuberculosis of bone. These cases were treated with the second toxin, "TR," early in 1898, and in both cases of osseous disease satisfactory results were obtained, which have persisted three years after treatment. In the pulmonary cases the report is negative. Caillaud urges the importance of trying tuberculin cautiously in cases of tubercular arthritis before resorting to mutilating operations.

Treatment of Insanity by Rest in Bed.—Russian writers have objected to the treatment on the ground that it leads to constipation and loss of weight, facilitates masturbation and makes it difficult to get patients to resume ordinary life. WIZEL, however, is a strong advocate of

the method (*Ann. Méd. Psych.*, Paris, 1901. No. 2). Many of his patients have gained in weight. Constipation has not been increased. Patients are permitted to rise for their meals and to go to the closet. Constant observation is practised, but no restraint. Separate wards are used for noisy and quiet cases. Since introducing this treatment Wizel finds his asylum quieter and more like an ordinary hospital.

The Presystolic Murmur.—HUGH WALSHAM (*Lancet*, May 18, 1901) shows by means of the Roentgen rays that the presystolic murmur of mitral stenosis is synchronous with the presystolic thrill of that disease. If the hand be placed over the precordial region at the point of the maximum intensity of the thrill, we find that the thrill corresponds to the advance of the left border of the shadow of the heart, to the left, and ends abruptly with the retreat of the shadow to the median line. Or that the thrill is obviously presystolic in rhythm and ends with systole. If, at the same time, the stethoscope is placed upon the heart, it will be found that the murmur begins at the moment when the shadow of the left ventricle is advancing to the left—that is, during auricular systole—and ends abruptly when the shadow retreats toward the medium line, that is, with ventricular systole.

Flies and the Science of Scavenging.—G. V. POORE (*Lancet*, May 18, 1901), advises that every means should be taken to dispose of human and horse excreta, as it is in these materials that the female fly lays her eggs. The best method is to bury the excreta in long shallow furrows, rather than in deep trenches, which take too long a time to dig and thus necessarily increase the cost of the work. The author is convinced that enteric fever is caused by the carrying of the germ from the excreta to the human subjects by flies. Cow dung should be stacked in piles and then covered with earth, so that the female fly cannot deposit her eggs in it. As each fly lays about 120 eggs at a time it is reasonable to suppose that in a hot summer she will breed in all, over 25,000,000 descendants.

Sterilizing Soft Catheters.—H. T. HERRING (*Brit. Med. Jour.*, May 25, 1901), describes a new and original method of sterilizing soft catheters. A series of metal tubes are connected with a flask which has been filled with paraffin and water. On heating the contents of the flask the steam and paraffin pass up into the tubes containing the catheters and coat them with paraffin. Bacteriologic examinations show that this method is highly efficacious. These tubes are plugged with sterilized corks and are ready for use when needed. It takes about twenty minutes to sterilize a dozen catheters.

Erythema Multiforme and Vaccination.—NORMAN WALKER (*Brit. Med. Jour.*, May 18, 1901), says that many cases of vaccinations are followed by an erythema even after four weeks, in which it is difficult to distinguish it from erythema iris or erythema multiforme. The hands, face and legs are covered with a bullous eruption in some cases. All these cases, which came under the author's observation, have been vaccinated with glycerinated lymph, which makes the writer wonder if the erythema may be due to some toxic substance introduced with the vaccinia virus. Gilchrist of Baltimore thinks this is the best explanation. The course of the erythema was uneventful and the eruption very rapidly disappeared.

Malignant Diseases.—After carefully analyzing 5,000 cases of death from malignant diseases, E. N. NASON (*Brit. Med. Jour.*, May 18, 1901), says that all predisposing causes resolve themselves into conditions in which the resisting powers of the individual have in all probability been reduced or destroyed. When this condition exists it is the time for the invasion of the parasitic organisms, if there be such organisms. Granting the existence of such germs, they must enter the points of inoculation by direct absorption, by the intestinal tract, by way of the respiratory tract or by direct inoculation through skin abrasions, or by bites of blood-sucking insects.

The Nasopharyngeal Origin of Goiter.—From the study of 209 cases of goiter, H. DU FOUGERAY (*Le Progrès Médical*, May 25, 1901) believes that chronic catarrh of the nasopharynx is probably one of the causative factors of goiter. By proper treatment of this region, the goiter disappeared in 52 cases, diminished notably in 133, and was only slightly affected in 24. One of the cases presented exophthalmos, but a slow pulse and no definite sign of Grave's disease; and both exophthalmos and goiter yielded to intranasal treatment. In two cases of true exophthalmic goiter, great benefit was obtained, but the results are too recent to be conclusive. It is a fact that rhinopharyngitis is the rule among goitrous patients, and lately it has been shown that the thyroid and pharyngeal veins anastomose and have but few valves, so it may be possible that a congestion of the pharynx may be such as to relieve itself on the thyroid system, and so produce there a hyperemia, and then a goiter. The author's routine treatment has been to paint the oropharynx three times a day with 10 per cent. mentholated oil, to spray the nose with the same oil five or six times a day, and to cauterize the affected parts of the nasopharynx with a 50 per cent. solution of chromic acid.

Vaginal Hysterectomy.—A. DÖDERLEIN (*Archiv f. Gynäkol.*, B. 63, H. 2 and 3) describes a new modification of this operation which consists of the following steps. After the insertion of two lateral and one posterior vaginal retractor the cervix is seized by two strong volcella at its right and left margins, drawn strongly down and divulsed. With scissors in the median line posteriorly the posterior lip of the cervix and the vaginal wall are divided into the cul-de-sac of Douglas. When this is divided in the median line behind. The cervix is

reached, extrapertioneally the uterine body is meanwhile drawn steadily forward and the lips of the uterine wound farther and farther apart. When finally the fundus is reached and cut through the organ lies outside the vulva and opened up somewhat like a fan. The anterior uterine, cervical and vaginal walls are now divided *seriatim* until the base of the bladder is reached. The halves of the organ are now stripped of peritoneum and the attachments still left within the pelvis are tied and cut through. The wound is then closed by some of the well-known steps.

Myomectomy During Pregnancy; Delivery at Term.—Myomata of the pregnant uterus are divisible into three classes: (*a*) Pedunculated myomata not apt to interfere with pregnancy or delivery and not calling for surgical interference; (*b*) subperitoneal and interstitial tumors of the body, removal of which is liable to be followed by abortion; (*c*) sessile or pedunculated tumors which are so situated that interference with delivery is inevitable. The advocacy of hysterectomy when surgical interference is called for is considered by J. D. EMMET (*Am. Gyn. and Obstet. Journ.*, June, 1901) to be founded on the erroneous belief that myomectomy is nearly always followed by abortion. The author removed in one case nine sessile myomata, one of which was deeply interstitial. Pregnancy continued uneventfully to term.

Cancer of the Lower Lip.—A. STIEDA (*Archiv f. klin Chir.*, B. 63, H. 3) states that all operations for cancer must involve not only a removal of the cancer itself, but also of the efferent lymph-channels and glands. The area which these cover is roughly bounded on each side by the body of the lower jaw and behind by the hyoid bone and in front by the symphysis. The incision which exposes this large field begins practically at the angle of the lower jaw, follows the body forward to the symphysis and then curves backward along the body on the other side till the angle there is reached. The large horseshoe-shaped flap thus made is folded backward along its base and the two submaxillary triangles and the submental space are freely exposed for cleaning out.

Treatment of Chorea Gravidarum.—Physical and mental calm are regarded by OUI (*Jour. de Méd. de Paris*, June 16, 1901) as of primary importance. If necessary the patient should be kept in bed. Although Vinay counsels the use of large doses of antipyrin, its action on the kidneys contra-indicates its use in pregnant women in whom renal integrity is indispensable. Bromide of potassium, zinc oxide and valerian have given very variable results. Chloral is highly recommended, its administration being conducted by Oui according to the rule of Pinard, who prescribes sufficient doses to keep the patient asleep almost continually, arousing her only for meals.

Skiagraphy in Surgery.—J. RUDIS-JICINSKY (*Annals of Surgery*, 1901, No. 6) states that as the technic of making skiagraphs improves, the value of its resources in surgery is increased, the fields of its usefulness and application widen and its errors and false interpretations become less numerous. The Roentgen-ray may be used with increasing safety and accuracy. It reveals in proper hands more than examination under ether, without the danger and discomforts of an anesthetization. It often does away with the necessity of any manipulation whatever. The duration of the exposure is usually a matter of experiment and experience. After five negative skiagraphs made by an exposure of several minutes, he succeeded in demonstrating the gallstones sought by making the exposure only fifty seconds. A change of view-point is also desirable when the picture resulting is not favorable. A series of views must also often be had from various points in order to give all the necessary information. After a little experience, the shadows will show not only the position of bones, but also their pathological condition. The author then cites examples of old dislocation of the hip, diagnosed as coxalgia, of old blood-clot under the parietal bone without definite clinical diagnosis and of early spondylitis, all made definitely correct by the use of the X-ray.

Value of Calcium Carbide in Inoperable Uterine Carcinoma.—It is believed by I. C. CHASE (*Jour. Am. Med. Assoc.*, June 22, 1901) that many inaccurate statements have found their way into recent literature on the subject of calcium carbide. In contact with water this substance is violently disintegrated, liberating acetylene according to the formula $CaC_2+H_2O=CaO+C_2H_2$. Chase finds that acetylene has no specific annihilative action on carcinomatous cells; it has no escharotic effect and no bactericidal action on pathogenic bacteria or bacteria of putrefaction. The principal action of calcium carbide is due to the quicklime liberated. But if a caustic is desired lime is not a rational selection, because of its superficial action, the character of the necrosis and the tendency to promote hemorrhage. The amount of heat evolved may be sufficient to slighty cauterize the tissues; the heat of actual cautery, however, gives firmer cicatrices with better resistance to carcinomatous invasion.

A Modified Murphy Button.—E. P. PAYR (*Deutsche Zeitschr. f. Chir.*, B., 59, H. 3 and 4) in a contribution on the technic of various abdominal operations describes a feature of a Murphy button which is briefly a great elongation of the male tube. The advantages of this tube in operations which permit it to be used are that it forms a drain and irrigation channel and a protection to the outer dressings. The operations for which it is best adapted are resections of the rectum and colostomies. In the resection of the rectum the proximal stump of sigmoid colon is attached to the male segment and the anal portion to the female. When the two are united the long tube projects outward in the axis of the bowel and beyond the level of the perineal plane. Suitable drains and dressing are applied around it

and ordinarily remain perfectly clear of fecal matter. The same purpose is carried out more fully by attaching a rubber hose over the end of the tube which can be carried into a receptacle containing an antiseptic, beneath the bed. If the feces are kept fluid by small amounts of saline purgatives, they will drain away steadily. Gentle irrigations may be practised through this tube-system also. In the colostomies, especially the inguinal, whether lateral or after transverse division of the bowel; the male part is put into the bowel and the female placed upon it with only the transversalis fascia and peritoneum between.

Pseudo-Myxedema Due to Testicular Distrophy.—A man, thirty-six years of age, who gave a syphilitic history, and who during five years experienced lassitude, weakness of the lower extremities, mental dulness and sexual impotence was examined by DALCHÉ *(La Semaine Méd.*, June 12, 1901). The legs, abdomen and face were the seat of a hard infiltration resembling myxedema. The thyroid was of normal size; the testicles were markedly atrophied. There was a total loss of vision in the left eye, due to choroiditis. Mercury and iodide of potassium gave no relief. Testicular extract was then resorted to and in a few days the subcutaneous infiltration disappeared and the patient's mental and sexual potency returned.

Surgery for Typhoid Fever.—T. J. MACLAGAN (*Brit. Med. Jour.*, June 15, 1901) says that there are a certain series of typhoid-fever patients in whom during the third and fourth week of the disease the intestinal ulcers begin to cast off their sloughs. These are usually small and pass into the cecum and along the large intestines and are voided without difficulty. Occasionally, however, the sloughs are individually large or through weakness in the bowel-wall collect in masses which are retained in the cecum. Here as the decomposition goes on it leads to toxemia by absorption and to a low grade of obstruction by its mass and the increased paresis of the gut-wall incident upon the accumulation of the gases produced. When such a condition is not alleviated by medical means the author commends resort to surgical emptying of the loaded cecum. His contention, although not based on actual experience, points to the probability that this will be, like intestinal perforation in typhoid fever, a fixed indication for surgical treatment, and interference in properly selected cases at the fitting time will prove another fertile means of saving life.

Nauheim Baths.—The value of the Nauheim treatment, especially in cardiac troubles, is discussed by H. N. HEINEMAN *(Med. Rec.*, June 22, 1901) who believes that in selected cases much benefit can be given. The important elements in the treatment are as follows: The warmth and the fact that it is a natural warmth, avoiding any injurious artificial application of heat by which important elements may be dissipated; the presence of alkaline salts and metals and also rarer elements the value of which is unknown; the large quantity of carbolic-acid gas held in active form; and, finally, a certain quantity of electromagnetism which these waters have in common with certain other springs. When patients with weak hearts are placed in a bath at 33.5° C. to 35 C. they first experience a feeling of oppression over the sternum, never alarming, and this is usually followed by a slowing of the pulse and respirations after the first hurried respirations have subsided. At the beginning the baths are kept up only four to six minutes, the time being increased in some cases to twenty minutes. To obtain the best results the Schott methods of exercise should be combined with the baths and this is now usually done at Nauheim. In addition, various cardiac disorders, such as myocarditis and fatty heart, and all forms of loss of compensation, numerous other chronic disturbances, such as nervous troubles, rheumatism, gout and inflammatory exudates, may be remarkably improved by this method of treatment.

Symmetrical Lipomata.—FÈRÉ and M. FRANCILLON (*Revue de Chirurgie*, 1901, No. 61) state that symmetrically occurring fatty tumors are equally common in people free from pathological taint, as in those afflicted with arthritis, albuminuria, alcoholism, rheumatism and cancer. They are comparatively rare in the nervous diseases, but have been reported in the insane, epileptic, tabetic, sciatic, general paralytic and other classes of the nervously afflicted. As to the pathogenesis of these fatty masses in multiple and symmetrical occurrence we are unfortunately ignorant, although a number of theories are extant, each having its advocates and its cases to support it. The chief theories recognize a lipomatous diathesis, or a vascular hyperplasia with a formation of new tissue, especially fat, or some connection between thyroid hyper- or subactivity, or a connection with lymphatic-gland or vessel changes, or, finally nervous trophic influences.

"Fourth Disease."—J. J. WEAVER *(Dublin Med. Sc.*, June, 1901), reports a series of cases of an affection which has been provisionally called "fourth disease," because of its clinical resemblance to, but distinctness from measles, scarlet fever and German measles. The closest resemblance is with German measles, the principal point of distinction being the rash. While the rash of German measles is always patchy at some stage, that of "fourth disease" is uniform, finely punctate, and practically indistinguishable from scarlet fever. The rash of "fourth disease" appears first around the mouth; the temperature rarely exceeds 100° F. and the pulse is not much slight or absent, there is little feeling of accelerated; moreover, the throat symptoms are illness and no loss of appetite. As in German measles, the incubation period in "fourth disease" is from nine to twenty-one days; in both affections the eruption is the first symptom. Posterior cervical glandular enlargement is absent in "fourth disease," desquamation is rare, and sneezing, coryza and cough do not occur.

Abolition of the Pupillary Reflex and its Re-

lation to Syphilis.—The permanent abolition of the pupillary reaction to light, provided it is not associated with a lesion of the globe of the optic nerve or of the third cranial nerve, is almost pathognomonic of hereditary or acquired syphilis. BABINSKI and CHARPENTIER (*La Méd. Moderne*, May 21, 1901) have made numerous observations in confirmation of this view. A patient in whom this pupillary sign appears is a candidate for tabes dorsalis, meningo-encephalitis or syphilitic affection of the brain or cord. As the sign may be unaccompanied by any symptom, it should be systematically sought for, and where it exists specific treatment should be begun at once.

THERAPEUTIC HINTS.

Infant Feeding.—The rapid cooling of milk with proper aeration, following strict cleanliness in its production, are the essentials for pure milk. Such milk sent from this country to the Paris Exposition was sold there as fresh milk. Chemical preservatives and sterilization are harmful, but heating to 170° F. will destroy most of the bacteria without hurting the milk. At 50°-60° F., nine-tenths of the butter-fat rises to the top of a bottle of milk in twelve to twenty-four hours, so that the upper nine ounces of a quart bottle will contain all the cream, and the percentage of fat to proteids will be three to one. This is about the proportion in human milk, so it is only necessary to dilute this and add sugar to approximate the proportions in human milk. A milk containing about 4 per cent. of fat will give in the first nine ounces 12 per cent. of fat, 4 per cent. of sugar and 4 per cent. of proteids. This, diluted three times, gives fat 4 and proteids 1, and by the addition of one part of sugar to each twenty of the dilution, makes the sugar 6, about the composition of human milk. A milk containing 3 per cent. of fat yields in its upper nine ounces, 9 of fat and 3 of proteid, while a 5 per cent. milk gives 15 fat and about 4½ proteid. The proteid of cow's milk, however, makes hard coagula, not easily penetrated by the digestive fluids, while the curd of woman's milk is soft. But cereal decoctions have been found to make the curd of cow's milk soft, so the author uses for dilution a dextrinized wheat, barley, or oatmeal gruel. He dextrinizes it by adding diastase or a malt extract made by soaking a tablespoonful of malt barley grains over night in two tablespoonfuls of water in a refrigerator.—H. D. CHAPIN (*American Journal of Obstetrics*, May, 1901).

Puerperal Sepsis.—Thorough disinfection of the whole genital canal should invariably precede other treatment. HIRST administers a 1-2,000 bichloride intra-uterine douche, then goes over the whole uterine surface with the curette and placental forceps, and then gives another intra-uterine douche. If the womb is flabby and large so that drainage is poor, he packs with iodoform gauze. Any local areas of inflammation in the vagina should be touched with silver nitrate, 10 per cent. If the symptoms continue, douches of plain water should be given several times a day. The patient must be given as much easily digestible food, chiefly milk, as she can assimilate, and much alcohol. Digitalis, if the pulse is above 110, and strychnine, or, in emergency, ammonium carbonate by the bowel, or nitroglycerin by hypodermic, may be required. Inhalations of oxygen may be useful. Absolute rest and freedom from mental and physical disturbances must be insisted upon. For two years the author has used nuclein as a routine part of his treatment to promote hyperleucocytosis. Recently hypodermatoclysis and saline injections have given good results; the best fluid for this purpose is calcium chloride, gm. 0.1 (gr. iss), potassium chloride, gm. 0.75 (gr. xiss), and normal salt solution, 1,000 c.c. (34 oz.). The infection may be so severe as to demand laparotomy with removal of uterus, tubes, or intraperitoneal abscesses.—B. C. HIRST in "Text-Book of Obstetrics."

Pneumothorax.—If intensely severe symptoms attend the perforation, a hypodermic of morphine should be given immediately. It relieves the mental distress, checks cough, and lessens the dyspnea. If there are marked signs of shock, and cardiac failure threatens, ether should be injected hypodermically at intervals. The movements of the affected side may be restrained, and overdistention prevented by broad adhesive straps extending beyond the median line both before and behind. The engorgement of the right side of the heart requires its own special treatment. It sometimes happens that severe dyspnea disappears spontaneously on the occurrence of pneumothorax. When a valvular opening in the lung allows the pleural cavity to so fill with air that the lung is compressed. A cannula should be inserted in an intercostal space and left till the lung is healed. Cases of tubercular pyopneumothorax do badly after free incision. A good treatment for these cases is to place patient on the back at the edge of the bed, and to insert two hollow needles with rubber tubes attached, one in the anterior chest and the other in the posterior. The anterior tube comes from a large bottle of warm boric-acid solution prepared with sterile water, and the other tube is connected with an aspirator or drains into a basin on the floor. The fluid runs from the chest and is replaced by the boric solution. When the stream runs quite clear, the anterior needle is withdrawn, and as much as possible of the remaining fluid removed. If the accumulation of air causes trouble, it may be removed in the same way as fluid, by aspiration. Ordinary pyopneumothorax requires the same treatment as empyema.—FOWLER AND GODLEE in "Diseases of the Lungs."

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

COMMUNICATIONS in the form of Clinical Memoranda, Correspondence, or News Items of interest to the profession are invited from all parts of the world. Reprints to the number of 250 of original articles contributed exclusively to the MEDICAL NEWS will be furnished without charge if the request therefor accompanies the manuscript. When necessary to elucidate the text illustrations will be engraved from drawings or photographs furnished by the author. Manuscript should be typewritten.

SMITH ELY JELLIFFE, A.M., M.D., Ph.D., Editor,
No. 111 FIFTH AVENUE, NEW YORK.

Subscription Price, including postage in U. S. and Canada

PER ANNUM IN ADVANCE	$4.00
SINGLE COPIES	.10
WITH THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, PER ANNUM	7.50

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

LEA BROTHERS & CO.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK,
AND NOS. 706, 708, & 710 SANSOM ST., PHILADELPHIA.

SATURDAY, JULY 6, 1901.

PARASITES FROM THE PHILIPPINES.

SINCE acquiring the Philippines we have been realizing by degrees something of the heterogeneous nature of our new possessions. With our tendency to "want the earth, and get as much as we can hold," we discover, as did Mrs. Stetson's Neolithic man, that

"We're going to have diseases and accomplishments and sins."

A circular on Tropical Diseases coming from the printing office of the Chief Surgeon of the Headquarters Division of the Philippines lies before us. It is one of a series prepared to place in the hands of physicians when they arrive in these islands in order to enable those who have had no experience with the diseases of the tropics to aid in the diagnosis of the common maladies as well as to prevent their epidemic spread.

This first issue is replete with parasites, those of the animal kingdom alone being described. Certainly the struggle for existence must be keen in the Philippines if so many parasites are found as are here described. Amœba dysenteriæ, amœba coli, balantidium coli, three flagellate infusoria, undetermined, tænia solium, tænia saginata, tænia echinococcus, ascaris lumbricoides, oxyuris vermicularis, trichocephalus dispar, trichina spiralis, filaria sanguinis hominis, anchylostoma duodenale, strongyloides intestinalis, calliphora vomitoria, anthomyia canicularis, hirudo and paragonimus Westermanii are among those enumerated in this preliminary report.

To realize that these parasites are extremely common and very liable to infect foreign soldiers, especially if they fall into the careless and slovenly habits so readily acquired in the tropics, is a matter of the greatest importance to the physicians of the army. Familiarity with the diseases they will certainly acquire by disastrous experience if they are not forewarned, and more than one tropical malady will come to the United States if we are not forearmed; but the dissemination of such circulars as these promise to be, will prove most efficacious in diagnosing the diseases and prevent them from spreading.

THE SURGICAL TREATMENT OF AMEBIC COLITIS.

FEW, if any, diseases are more obstinate in their resistance to treatment which is at times apparently curative than amebic dysentery. In the early stages, before the amebæ have secured a firm foothold in the deeper layers of the intestine, and before extensive ulceration has occurred, irrigations may both arrest their growth and lead to permanent recovery. On the other hand, improvement or apparent cure is often only temporary, and repeated and protracted treatment may fail to produce any lasting effect. There is good reason to suppose that if, in these unyielding cases, the intestine could be kept absolutely at rest, free from all irritation, stimulating, antiseptic, and astringent irrigations would be far more effectual. This principle has been applied in the treatment of other inflammatory and ulcerative processes in the large intestine, but apparently has only recently been employed in amebic colitis.

Murray (*Annals of Surgery*, May, 1901) obtained a partial success in a most obstinate case by the formation of an incomplete artificial anus. The partial rest secured to the colon by this procedure, with irrigation from the colostomy opening downward with various solutions, of which silver nitrate seemed most efficient, caused marked improvement. Before the operation the effect of irrigation had been extremely transitory. While under observation after the colostomy the amebæ appeared at times in small numbers, but recovery was

sufficient to allow the patient to work for the first time in over two years. Six months later he was found still able to work, with the colostomy wound nearly healed, and the movements numbering two or three a day but always containing mucus. The writer acknowledges the incompleteness of the method employed and advocates for the treatment in future of chronic cases of amebic colitis, the formation of a complete artificial anus followed by irrigation. He considers as suitable cases for this procedure those which fail to yield to medical treatment within four months.

Judging by the results obtained with other forms of ulceration and by the partial cure following the incomplete operation in Murray's case, it seems not unreasonable to suppose that even such an intractable affection as amebic colitis may yield to a complete colostomy. The artificial anus should be left open until, as the writer suggests, no amebæ are found in the irrigating fluid, and examination of the lower portion of the bowel through the anus and the ascending colon through the colostomy wound, by means of Kelly's long rectal speculum, fails to disclose the presence of ulcers. In view of the progressive character of the disease, leading to a fatal result, it appears perfectly justifiable to expose the patient to the danger incurred by the operation. The number of cases of amebic colitis in this country is likely to increase with the acquisition of colonies where it is prevalent, and the importance of what bids fair to lead to a cure will correspondingly advance.

HYPODERMOCLYSIS IN THE TREATMENT OF PNEUMONIA.

NEARLY nine years ago the MEDICAL NEWS published an editorial article by the present writer upon the treatment of pneumonia, embodying what seemed to be the most advanced position of that day (August 20, 1892). In that article which strongly urged the discriminating use of venesection and the timely use of oxygen is likewise to be found the following: "Subcutaneous infusion (hypodermatoclysis) of saline solutions, as practised by Dr. F. P. Henry of Philadelphia, is unquestionably useful, probably by helping to maintain the fluidity of the blood in the same manner as the internal administration of ammonium salts, and by washing out noxious matters."

As the question of priority in this method of treatment has recently been agitating some medical writers and medical journals, it may be well to give it further consideration. As our statement above quoted shows, Dr. F. P. Henry of Philadelphia had for some years previous to that time treated cases of acute lobar pneumonia by using, among other measures, subcutaneous infusion of physiologic salt solution, and the method was presumably so well known to all readers that it was not considered necessary at that late day to call attention to its novelty or to describe the process.

As a matter of historic fact Dr. Henry's first case was treated at the Philadelphia Hospital in the year 1889. His first publication on the subject is contained in a footnote in Hare's System of Practical Therapeutics, first edition, 1892, volume 2, page 290, in the course of a chapter on typhoid fever which he contributed to that work. He says, "The surest method of conveying water to the tissues is by subcutaneous injection of (deci-) normal saline solution—a solution of common salt of the strength of fifty grains to a pint. About three years ago a number of cases of pneumonia at the Philadelphia Hospital were treated by the writer in this manner and with excellent results, both as regards palliation and cure." This and our own reference certainly constitute sufficient publication, even if nothing further had been said upon the subject from that day to this to establish Dr. Henry beyond doubt as the originator of the method, and to render it incumbent upon any further worker in the field to refer to Dr. Henry's observations.

However, there have been additional publications made. At the meeting of the Association of American Physicians in 1894, Dr. Beverley Robinson of New York read a paper on "The Treatment of Pneumonia," in the course of which he said, "In a late number of the *Virginia Medical Monthly*, Dr. Cunningham of Ensley, Alabama, contributed a very valuable paper in which he writes that he employed hypodermoclysis of saline solution daily in just such cases, with the object of preventing cardiac failure which, he thinks, may be due to antemortem clot." In the discussion of Dr. Robinson's paper, Dr. James C. Wilson of Philadelphia remarked. "In regard to the intravenous or hypodermatic administration of large quantities of sterilized salt solution, alluded to by Dr. Robinson, I would like to call the attention of the Association to the fact that this method has been practised to a consider-

able extent in the wards of the Philadelphia Hospital by Dr. Henry, and in cases of this kind, with very satisfactory results." This brings Dr. Cunningham into the field as another worker in the same line, apparently independent of Dr. Henry, and certainly with priority over any one subsequent to Dr. Henry.

In the *Philadelphia Polyclinic* for July 20, 1898, the present writer, in the course of a signed editorial on "The Uses of Physiologic Salt Solution, or Artificial Serum," says, "A perusal of current literature will show how much the use of physiologic salt solution is extending. It is introduced in urgent cases by intravenous injection, in less urgent cases by subcutaneous infusion or hypodermoclysis. In toxemias, in which class of cases, for example, delirium tremens and pneumonia both find place, preliminary or coincident venesection may usefully be made. We have seen recovery take place in doubtful cases under this form of treatment. In some cases the injection, after a preliminary irrigation, of a pint or a quart of warm saline solution into the colon, by means of a large rubber tube carried as high into the bowel as possible, has seemed to serve a good purpose in cases of deficient excretion of urine; and in pneumonia and uremia to keep up the good effect previously obtained by hypodermoclysis." Here the allusion is to the use of physiologic salt solution in pneumonia as a well-known practice, and the original contribution, if any, is regarding the coincident use of venesection.

In the article in the *Philadelphia Polyclinic* for October 15, 1898, on "Therapeutic Saline Solutions and Their Uses," the following occurs: "I have used both venous infusion and subcutaneous infusion with great satisfaction and much success in uremic conditions, including actual coma. In such cases it is well to precede or accompany the introduction of saline solution by bloodletting. The same remarks will apply to the coma of delirium tremens, as exemplified in a case recently under my care at the hospital, and which Dr. Torrance, our efficient and skilful resident, published in a recent number of the *Philadelphia Polyclinic*. In a severe case of measles in an adult seen last spring in consultation with Dr. M. Staller of this city, and in which acute nephritis with hematuria and a massive catarrhal pneumonia were the complications, wet cupping over the kidneys, followed by hypodermoclysis with therapeutic saline solution (sodium chloride, 0.75 per cent.) seemed to be largely responsible for the patient's recovery. The hypodermoclysis was repeated several times at intervals of twenty-four to forty-eight hours. In a case of pneumonia in an elderly patient with diabetes hypodermoclysis with therapeutic saline solution (sodium chloride, 40 grains, sodium carbonate, 20 grains, to the pint of sterilized water) restored the interrupted flow of urine, and averted the coma that seemed threatened by the semi-stuporous condition of the patient. In this case, after the acute danger had passed, a quart of saline solution was thrown high into the colon, daily. Much of this was retained and it seemed to have a good influence upon the kidneys." All these publications were made prior to the very excellent paper of Dr. Clement A. Penrose on "Infusion of Salt Solution Combined with a Special Method for the Administration of Oxygen Inhalations as a Treatment in Pneumonia," in the *Johns Hopkins Hospital Bulletin*, No. 100, July, 1899, reporting his first case treated February 14, 1898.

The most complete publication, however, upon the subject of this article, was printed in the *International Clinics* (Vol. 4, 9th series, 1900), by Dr. Henry, in which he reports twelve cases treated in 1889 and in 1899, in ten of which recovery took place, two terminating fatally. In this communication reference is made to Dr. Cunningham's paper and to that of Dr. Beverley Robinson, the latter of whom suggests the employment of hypodermoclysis after bleeding, as to which specifically combined procedure, therefore, he preceded the writer in publication, though not in practice. Dr. Henry, himself, advances no claim to priority, although he seems to have been the first to employ the method systematically. It is a good method and should be resorted to with far greater frequency than is the ordinary custom. As we said of the use of oxygen in our editorial of 1892, so may we say of hypodermoclysis, that to get the best results it should be used in time, and that it is foolish to wait until the patient is dead, expecting then to bring him to life either with salt or with oxygen.

It is to be hoped that the discussion as to priority if it have no other effect, will strongly direct professional attention to the great usefulness of the method, and thus indirectly lead to the saving of many a life.

ECHOES AND NEWS.

NEW YORK.

Physicians for the Tenements.—At a recent meeting of the Board of Health of New York City it was decided to have the summer staff of physicians of the Board pay visits to the tenements during the summer and alleviate all cases of sickness among the poor. The visits will commence on July 8th. The Board will refer all appropriate cases to the summer staff for treatment.

Floating Hospital Service.—The floating hospitals of St. John's Guild will start their summer's service for the children of the poor on Monday, July 8th, and thereafter the two hospitals will make trips every day except Sunday, one running on the North River and one on the East River.

Ravages of Heat in New York City.—The heat for the past week has been excessive and as usual under these conditions has caused much suffering and numerous deaths. During the first four days of the present week the deaths directly attributable to excessive heat in Greater New York exceeded 250 and the number of prostrations reported reached 400. It is safe to say that many cases of heat exhaustion were cared for privately and are not included in this number.

New Tenement Law.—The Department of Health has now taken notice of the several clauses of the Tenement-House act, which has become a law. It has sent out the circulars embodying the text of the law, most of which has been in force for considerable time past. This circular, addressed to the owner, lessee, or agent of the house, contains the portions of this law which are new, as follows:

"A tenement house shall be subject to a penalty of $1,000 if it or any part of it shall be used for the purpose of a house of prostitution or assignation of any description, with the permission of the owner thereof or his agent, and said penalty shall be a lien upon the house and the lot upon which the house is situated. A woman who resides in or commits prostitution in a house of prostitution or assignation of any description in a tenement house, or solicits any man or boy to enter for such purpose a tenement house, shall be deemed a vagrant, and upon conviction, shall be committed to a county jail for a term not exceeding six months. If a tenement house is used for purpose of prostitution or assignation or any part thereof, with the permission of the lessee or his agent, the lease shall be terminable at the election of the lessor. A tenement house shall be deemed to have been used with the permission of the owner and lessee if summary proceedings for the removal of the tenants of so much thereof as is unlawfully used shall not have been commenced within five days after notice of such unlawful use served by the Department of Health. Whenever the liens upon a tenement house shall amount to $1,000 or over, the Department of Health shall appoint a receiver of the rents and profits of said property."

Until the new Tenement-House Commissioner is appointed the responsibility so far as the Board of Health is concerned for the Borough of Manhattan will rest principally upon the shoulders of Dr. Frederick H. Dillingham, Assistant Sanitary Inspector.

PHILADELPHIA.

Prostrations from Heat.—The excessive heat of the last days of June has been responsible for many prostrations and several deaths. There were 8 deaths directly attributable to the heat on June 29th and at least 4 on June 30th. Hospitals having yard facilities for heat tents are treating the greater number of cases, but the others are receiving many cases daily.

St. Joseph's Hospital.—Dr. J. Chalmers Da Costa has resigned as surgeon. The vacancy has been filled by the appointment of Dr. Charles F. Nassau.

Philadelphia Hospital.—The appointment of 24 resident physicians for the year beginning July 1st has been made. The Woman's Medical College of this city numbers two of its graduates among this number.

Death of Pennsylvania's Oldest Practitioner.—Dr. J. Augustus Ehler died at his home in Lancaster June 29th at the age of eighty-seven years. He was supposedly the oldest practising physician in the State and had been in active practice for sixty years. He was one of the founders of the Lancaster City and County Medical Society and of the Pennsylvania State Medical Society.

Site for Almshouse.—The special committee of inspection, after making a tour of the islands of the Delaware River, has decided that Petty's Island, opposite the northern section of the city, offers the best advantages as a site for the new buildings. The island, however, belongs to New Jersey and its concession is necessary before operations are begun.

Eosinophilia in Trichinosis.—At the Pathological Society, June 27th, Dr. R. C. Rosenberger read a report of the pathological findings in a case of trichinosis in St. Joseph's Hospital under the care of Dr. J. Chalmers Da Costa. The only part of the body affected was the right leg and thigh. Encapsulated trichinæ were found in the muscles, many of the capsules being surrounded by accumulations of lymphoid cells. Four blood-counts showed eosinophiles, varying from 2.5 to 4 per cent. The conclusion reached was that eosinophilia was not pathognomonic of trichinosis. An extended review of the literature showed that marked eosinophilia was met with at times in numerous other diseases. In discussing the paper Dr. W. M. L. Coplin suggested the prob-

ability of a recrudescence of lesions in the case. This would be borne out by the lymphoid cells found around the older capsules, the absence of eosinophilia which is commonly marked in initial outbreaks of trichinosis, and by the history of injury which sets up activity in encapsulated parasites of other forms.

Medico-Chirurgical Hospital.—Medical circles are much interested in the attack made by the *Times* on the Medico-Chirurgical Hospital during the past week. In commenting on the large appropriation, $190,000, received by the hospital from the State, if the Governor signs the bill, comparison was made between the proportion of free patients treated by that and other hospitals. Statistics quoted show that 54 per cent. of its patients during 1900 were free. Compared with this the Pennsylvania maintained nearly 96 per cent. and the Episcopal 94 per cent. of their patients free. Neither of these hospitals receives State aid.

CHICAGO.

Resignation of Dr. Robison.—Dr. John A. Robison has resigned the Assistant Professorship in Medicine in Rush Medical College.

Officers of the Chicago Society of Internal Medicine.—At the annual meeting, held June 27th, the following officers were elected for the ensuing year: President, Dr. Edward F. Wells; Vice-President, Dr. George W. Webster; Secretary, Dr. Robert B. Preble; Treasurer, Dr. M. L. Goodkind; Censor, Dr. John M. Dodson.

Reform at the Cook County Hospital.—Some of the new rules now being enforced at the Cook County Hospital are as follows: No person suffering from delirium tremens will be admitted to the institution. Heretofore, owing to lack of other accommodations, these victims of drink have been placed in wards occupied by patients suffering from fever and other serious ailments, to the detriment of the latter. Solicitors for attorneys seeking damage suits, claim agents seeking to make settlements with those whose have suffered personal injuries, and "runners" for undertakers who are seeking to increase their business will be denied admission. Political pulls will keep no employees of the hospital who fail to perform their full duty in their places. All discharges of patients will be made only by senior internes, subject to the approval of the Warden. A clinical director, to be selected by the County Civil Service Commission, will be added to the hospital staff at a salary of $1,200 a year. The Executive Committee of the attending medical staff will meet with the Warden each month. For some years these monthly meetings have been dispensed with, and there has been friction between the physicians and the Warden.

To Erect a New College.—Plans for a new college building and hospital, to cost $100,000, were discussed by the Directors of the American Medical Missionary College at their annual business meeting recently. It is thought that the building will be put up near the Cook County Hospital.

Prevention of Illegal Trade in Narcotics.—To prevent the illegal and ever-increasing sale of narcotics in the downtown district, the First District Auxiliary Association of Pharmacists has been formed. The sale of cocaine and morphine in the levee district has greatly increased during the last year, and it is estimated that more than three hundred ounces of the former drug are sold monthly to persons addicted to its use. This is procured without physicians prescriptions, or other authority, the statutes governing its sale being openly violated. Apathy on the part of the City and State officials is said to be the cause of the laxity of the druggists. A committee was appointed to investigate the matter. A more rigid adherence to the provisions of the new State Pharmacy Act, pertaining to registered and competent assistants, also will be required by the Association, and the assistance of the State's Attorney will be asked for its endorsement.

Fire at the College of Physicians and Surgeons.—A bolt of lightning, striking the dome of the building of the College of Physicians and Surgeons, June 25th, set fire to the top floor, where the anatomical and physiological laboratories were situated. The damage done to the college building is estimated at $30,000. The college is insured for $100,000. The physiological laboratory outfit, consisting of apparatus that cost over $15,000, was all destroyed. The damage to contents would have been far more serious, but for the fact that many valuable pieces of apparatus had been taken the day before to the West Division High School, which building has been recently purchased by the College.

GENERAL.

Hospital-Ship "Maine."—The Earl of Selborne, First Lord of the Admiralty, announced in the House of Lords that he had great gratification in informing the House that the hospital-ship "Maine," which was fitted out by a committee of American ladies for the use of the wounded and sick in South Africa and which later was sent to Taku, where she took on board wounded and sick men of various nationalities, had been presented as a gift to the British navy. The hospital-ship "Maine," originally was loaned by the Atlantic Transport Company, through its president, Bernard Baker, of Baltimore, Md., to a committee of American ladies, who fitted the vessel up as a modern hospital ship, placed her in charge of American doctors and nurses, and sent her to Cape Town and Durban to care for the wounded and sick in the South African War. At Cape Town and Durban she received both the British and Boer wounded and sick, and in due course of time returned to Southampton with more than 350 invalided British soldiers.

She was re-equipped there in nine days and sent back to South Africa to bring home another shipload of invalids.

Census of European Nations.—The census returns show the population of France to be, in round numbers, 38,600,000, an increase of 330,000 on 1896. To this small increase Paris and its suburbs contribute 292,000, the greater part of which number is due to foreign immigrants, so that the rest of France gives an increase of only 38,000. Since 1850 the population of France, allowing for alterations of boundaries, has only increased from 35,000,000 to 38,000,000, whereas that of the United Kingdom has risen from 27,000,000 to 41,000,000, Germany from 35,000,000 to 56,000,000, Austria from 30,000,000 to 45,000,000, Italy from 23,000,000 to 32,000,000 and Russia, partly owing to annexations, from 66,000,000 to 128,000,000.

Honorary Degrees for Medical Men.—Several medical gentlemen have been honored with honorary degrees this year. In addition to Professor George M. Lefferts of New York, who received the degree of Master of Science from Columbia, as already mentioned in a previous issue of the MEDICAL NEWS, Professor Theobold Smith of Boston and Professor Otto G. Ramsay of New Haven each received the honorary degree of Master of Arts from Harvard and Yale respectively.

Dr. Koch and the Treatment of Consumption.—A commission, of which Dr. Koch is President, recently visited the Consumptive Hospital at Slawentzitz, in Upper Silesia. The main object was to investigate the use of tuberculin, which for the past decade has been the sole medicinal remedy applied there. Dr. Koch expressed his complete satisfaction at the results of the visit, especially in regard to the treatment. Unfortunately this has not been the experience of others who have given tuberculin a fair trial.

Gift to a Medical Society.—Dr. J. Ewing Mears of Philadelphia has given to the Marion County (Ind.), Medical Society property in Indianapolis valued at $25,000, on which to erect a home for the Society as a memorial to his father, who was a pioneer physician in Indianapolis.

Army Medical Notes.—Major John Carling, Surgeon, United States Volunteers, having tendered his resignation, is honorably discharged from the service of the United States, to take effect July 3d.

Major Damaso T. Lainé, Surgeon, United States Volunteers, is relieved from duty in the Department of Cuba and will proceed to San Francisco for transportation to Manila, Philippine Islands.

Navy Medical Notes.—The following commissions of naval officers were signed by the President last week: Alfred W. Balch, as assistant surgeon with rank of lieutenant, junior grade; William H. Bucher, passed assistant surgeon, rank of lieutenant, junior grade.

Passed Assistant Surgeon R. S. Blakeman is ordered to Norfolk Hospital, July 2d.

Bubonic Plague in Portugal.—Press despatches announce the presence of bubonic plague in Oporto, Portugal. It is said that 12 cases have been reported, with 4 deaths.

Chemistry, Pasteur's Weak Point.—In a life of Pasteur, published in Paris, attention is called to the fact that the man who was destined to revolutionize chemistry came fourteenth in the list of twenty-two candidates at his high school in Dijon, and was marked "weak" in chemistry! His researches in regard to the disease of silkworms are said to have been the means of saving France a sum equal to that paid to Germany as the price of peace. When Napoleon III. became acquainted with Pasteur, what especially excited his wonder was that the eminent man of science had made no attempt to obtain a "legitimate profit" from the commercial application of his labors.

Famine Record in India.—A Blue Book on India, just issued, shows that $90,000,000 was expended for the relief of famine sufferers during the year 1899-1900. The mortality from the plague for the five years ending March, 1901, was nearly 600,000. The census completed in March, 1901, shows that the increase in population during the past ten years was only from 5,000,000 to 6,000,000 instead of the normal 19,000,000. The loss represents deaths from famine and the decrease in births in consequence of the famine.

The Law in its Relations to the Practice of Medicine.—In an article contributed to the July *Forum*, Mr. Champe S. Andrews, counsel to the New York State Medical Society, presents with admirable clearness and force the present status of the law in the several States in regard to restrictions upon the practice of medicine, emphasizes the grave need that there should be everywhere an adequate, accurate, and intelligent definition of what it is to practise medicine, and shows that law and reason are alike against the charlatans who, under various names strive to make the constitutional guarantee of religious freedom a defense against interference with their exploitation of human ignorance and credulity. With complete success Mr. Andrews attacks the grotesque fallacy that the practice of medicine necessarily involves the administration of drugs, and shows that it is not the use of any particular means or method of healing, but has reference (1) to the proper diagnosis of disease, and (2) to the utilization of all means by which disease can be prevented, alleviated or cured.

Harvard's New Medical School.—For several years it has been an open secret that the present facilities at the Harvard Medical School were

entirely inadequate to the growing requirements and that a complete, greatly enlarged and modern plant, consisting of a central administration building, with at least five detached laboratory buildings, including a hospital, was to be erected upon a elegant site that has been secured on Huntington Avenue. It was supposed that the carrying out of the plan would be a matter for the remote future. Nevertheless, the medical Faculty, through a committee consisting of Drs. Henry P. Bowditch and J. Collins Warren, proceeded to draw up plans and specifications for the buildings, which they would like to have and could use next year, if they had them. There would be five large buildings besides the power house. The estimated cost is $2,000,000. Last Friday Dr. Warren received a cable message from Mr. J. Pierpont Morgan, in which he said: "Referring to our conversation and plans submitted, I am prepared to erect the central buildings and two side pavilions as a memorial to Junius Spencer Morgan, a native of Massachusetts and for many years a merchant of Boston. You can announce this." When President Eliot made his announcement of the gift from Mr. Morgan he left the announcement of the donor's name to the very last, as the signature to the cable message to Dr. Warren. Thereupon the crowd went wild, ending in nine Harvards for Mr. Morgan. President Eliot called attention to the phrase "plans submitted," which, he said, included specifications that called for an outlay of more than $1,000,000.

Obituary.—Henry G. Wagoner, M.D., County Physician, of Somerville, N. J., died suddenly July 1st of apoplexy. He was seventy years old and prominent in Masonic and medical societies.

Dr. Charles A. Littler, a prominent physician, of Jackson, Mich., was found dead in the woods twelve miles south of his home July 1st. His jugular vein had been severed, and near the gaping wound was a scalpel, which had been taken from his case of instruments. Dr. Littler was independent financially, and, so far as known, was happy. He was on his way to perform an operation on a patient two miles from where his body was found.

Dr. John K. Curwin, eighty years old, died suddenly of heart disease yesterday at Harrisburg, Penn. Dr. Curwin built the Harrisburg Insane Hospital, and was its first Superintendent. He was subsequently Superintendent of the Warren State Insane Hospital. He served several times as a Commissioner to the Presbyterian General Assembly from the Carlisle Presbytery.

CORRESPONDENCE.

THE VIRCHOW FUND.

To the Editor of the MEDICAL NEWS:

DEAR SIR: Some months ago a Committee, consisting of Dr. Reed, President of the American Medical Association, Dr. Bowditch, President of the Congress of American Physicians and Surgeons, Dr. Weir, President of the New York Academy of Medicine, Dr. Welch of Johns Hopkins University, and the undersigned Secretary, published an appeal to the American medical profession requesting contributions to the Virchow Fund which was established ten years ago in honor of Rudolf Virchow's seventieth birthday, which was reached October 13, 1891. The Fund was created for the purpose of fostering biological, anthropological and general medical research. A large German Committee, with national Committees formed all over the globe, has undertaken to increase this Fund in honor of the coming eightieth birthday of the great medical reformer.

Whatever contributions will be raised should be sent to Germany on the first day of September in order to be received and acknowledged by the Central Committee in due time. As our former notices may have been overlooked by such as are anxious to show their appreciation of the great master and to aid the cause represented by his lifelong labors, we herewith repeat our appeal.

A. JACOBI, *Secretary.*

110 W. 34th Street, New York. July 1, 1901.

SMALLPOX.

To the Editor of the MEDICAL NEWS:

DEAR SIR: Your editorial of June 22d, referring to the discussion on pseudosmallpox before the recent meeting of the American Medical Association, has raised a doubt in the mind of the rural practitioner as to the status of the disease. Will you be kind enough to place before the medical profession the microscopic knowledge of smallpox that has been acquired up to the present time, just as has been done for other infectious diseases?

J. H. BILES, M.D.

Teller, Colorado, June 27, 1901.

OUR editorial on "The Smallpox Situation Once More" (MEDICAL NEWS, June 22d, p. 991) in commenting on the discussion on smallpox at the St. Paul meeting of the American Medical Association called attention to the possible existence of a third disease in the smallpox group intermediate to variola and varicella, as German measles is to measles and scarlet fever in the other group of exanthemata. We said that further observations along this line are eminently desirable as the question involved is one of the most important in medicine. We expressly warned, however, against permitting indefinite conclusions and inadequately completed observations to hamper the work of sanitation and universal vaccination which constitute our only safeguard against the smallpox that undoubtedly exists in only too many parts of the country.

With regard to doubts that may be raised in the mind of the practitioner, our editorial was meant to encourage wholesome skepticism, the

blest predecessor of more definite knowledge. To doubt is better than to be too sure. Uncertainty encourages accuracy of observation and this is just what is needed in the present situation in order to settle the vexed question of so-called pseudosmallpox (a term unjustified in the present state of the discussion) and make clear the status of certain doubtful cases that are certainly of the smallpox type.

The finding with the microscope in the present state of our knowledge cannot be of help in the solution of the problem. We are not as yet certain of the microbe that causes the disease. On page 388 of the MEDICAL NEWS, Vol. 78, there is an editorial review of the recent contributions to medical literature regarding the cause of smallpox. Like cancer it seems to be due to a protozoon, but that is all that can be said. However, without knowing definitely its cause, it may be possible to differentiate a disease resembling smallpox from true smallpox, for, after all, it must be remembered that we do not know the cause of either measles or scarlet fever, although we have succeeded in differentiating German measles from them.—[EDITOR.]

OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON, June 22, 1901.

THE GENERAL MEDICAL COUNCIL—AN ANTIMALARIA EXPEDITION TO SIERRA LEONE—THE FOUR-HUNDRED-AND-FIFTIETH ANNIVERSARY OF THE UNIVERSITY OF GLASGOW—SOME OF ITS MEDICAL GLORIES—THE MEDICAL PROFESSION AND THE WAR OFFICE—PROPOSED DINNER TO THE LATE DIRECTOR-GENERAL OF THE ARMY MEDICAL SERVICE—ANTIVIVISECTIONISM—LORD COLERIDGE AND THE ATHENÆUM CLUB: A RECORD "PILLING"—THE KING AS A PHYSICIAN.

THE General Medical Council, as to the functions of which I had something to say in my last letter, got through its work in a week, a record achievement for that slow moving body. The explanation is that it had not much to do. The principal matter before it was the contumacious conduct of the London Colleges of Physicians and Surgeons in regard to the five years' curriculum of medical study. This extended period of study was made compulsory by the Council a few years ago, and it naturally does not care to see its authority defied by the chief licensing bodies in England. The Colleges accept time spent by boys in grammar schools working at physics, chemistry and biology as constituting one year of the prescribed five of medical study, and virtually reduce the curriculum to four years, thus stultifying the enactment of the Council. The Irish Colleges, as was to be expected, have expressed their intention of following the example of their English sisters. There was an animated debate in the course of which the representative of the Royal College of Physicians, Dr. Norman Moore, declared that he would rather see the registration of medical students done away with than give up the rights, or, as he preferred to call them, the responsibilities of the institution of which he is the champion. The practical outcome of the discussion was that the Council agreed to reconsider a question which it had already decided and thus, in fact, surrendered its position. The whole controversy is largely a question of words, for ever since the establishment of the five-year curriculum one of them has in fact been devoted to subjects which are merely preliminary to the study of strictly medical subjects.

The other work of the Council included the hearing of charges of unprofessional conduct against medical practitioners. A surgeon in the navy was struck off the *Medical Register* for adultery with a patient proved in a public court of law. This sentence involves dismissal from the Navy and professional ruin. Dr. Ward Irvine, the *protégé* of the all-powerful Chamberlain clan, of whom something was said last week, appeared before the Council and was in effect dismissed with a caution. He had been summoned on an earlier day, but did not find it convenient to attend. The Council should really be grateful to him for helping it out of an embarrassing position, for if he had dared its wrath by staying away, it could scarcely, in view of the fact that he had ceased to commit the offence charged against him, have pronounced the sentence of major excommunication upon him. It would, indeed, have been in much the same predicament as a former Speaker of the House of Commons who threatened to "name" a refractory member. On the member inquiring what the consequences of this awful threat would be, the Speaker said solemnly, "God only knows." The situation was saved by the attendance of Dr. Irvine, and the incident is now closed as far as he is concerned, but some of the papers contend, not unjustly, that Mr. Joseph Chamberlain should apologize to the Council. This, it may safely be predicted, he will not do.

It may be mentioned that the Council has been looking into its affairs and has discovered that its financial position is unsatisfactory. It has found it necessary to ask the advice of an expert who, among other suggested retrenchments, proposes that the sessions should be shorter, the fees for attendance smaller and the allowances for travelling expenses less liberal. It is certain that the payment of twenty-six dollars a day to each member is a direct encouragement to exuberance of oratory and a cause of the deliberations of the Council being in Milton's phrase "in linkéd sweetness long drawn out." The medical profession would put up with less "sweetness" if it got more solid benefit from the Council.

Major Ronald Ross recently sailed from Liverpool for West Africa on a crusade against the deadly gnats whose bits breeds malaria. He proposes to attempt the extermination of the whole tribe, first at Sierra Leone, then, if success crowns his efforts, in other settlements along the

coast. He has a number of big Liverpool merchants at his back so there will be no difficulty about the sinews of war. All the supplies for the expedition have been given by merchants interested in its results, one contributing an abundance of oil, another all the cement required, a third a large quantity of chlorine compounds and sulphur, others materials for fumigation, etc. Dr. Matthew Logan Taylor who has been assistant to the Professor of Pathology in the University of Glasgow goes as the Major's assistant, and other scientific helpers will probably join the expedition later. Although the plan of suppressing malaria by the extermination of mosquitoes was advocated by Ross himself in a report to the Government of India in February, 1898, and although it has been carried into execution in Italy and also, I believe, in America, no municipality in the British Colonial possessions—except Hongkong—has hitherto had the enterprise to act on the suggestion. Ross calls this stupidity, but the municipalities would doubtless retort that it is partly at least want of money. Ross himself estimates the cost of the work at Freetown, Sierra Leone, alone as $3,000 a year, and it will probably be a great deal more. If, therefore, he is to rid West Africa of mosquitoes, he will have to carry on a war almost as costly as that in South Africa and of far longer duration, for mosquitoes are "slimmer" even than Boers.

The University of Glasgow has this week been celebrating with appropriate pride, pomp and circumstances, the four-hundred-and-fiftieth anniversary of its foundation. Like the other universities of Calvinistic Scotland, with the single exception of Edinburgh, it was founded by a Pope—Nicholas the Fifth, who gave it a constitution on the model of the University of Bologna. Glasgow has the names of many great men on its roll of fame. Among them (to take the classification and examples of a leading newspaper) are "philosophers, theologians, historians, scholars, statesmen, orators and men of science," such as "Bishop Elphinstone, John Knox, Andrew Melville, Robert Baillie, Archbishop Leighton, Bishop Burnet, Thomas Reid, Colin McLaurin, Adam Smith, James Watt, Thomas Campbell, Archbishop Tait, Professor Lushington, and Principal Caird." I have quoted this list as a curious instance of the indifference to the work of medical explorers and discoverers that prevails even among those whose business it is to lighten the darkness of what the man in the street is pleased to call his mind. I am not concerned to dispute the greatness of the men mentioned above, though I think it doubtful whether the celebrity of some of them has traveled across the Atlantic. But if the whole batch were placed in the scale of real achievement against the single name of Lister, is it not the simple truth that they would kick the beam? Lister was connected with Glasgow in his early days, and it was there that he made his first gropings toward the far-reaching truth of which he has been at once the prophet and the apostle. Another of Glasgow's glories is Professor Macewen who is held by many here to be the very best surgeon in the United States. But he is one of Carlyle's strong silent men, and the outside world hears little of him. A characteristic incident will show what manner of man he is. Some thirteen or fourteen years ago Victor Horsley published a successful case of removal of a small tumor of the theca and was straightway hailed, not only by the profession, but by the public as the pioneer of brain surgery. In 1888, when the British Medical Association held its annual meeting at Glasgow, a hard-featured, *dour*-looking man delivered an address in which, without ostentation, he gave particulars of various operations performed by him on the brain during the previous nine or ten years. The effect was electric; the whole meeting sprang to its feet and cheered till it was hoarse. It applauded not merely the achievement, but the character of the man who had slowly built up his cairn of truth without proclaiming the fact from the housetops every time he laid one stone on another, as is the fashion with too many enterprising operators. Macewen is in the sphere of surgery a man of action; he has done much but written little, but what he has written is nearly all pure gold. Another Glasgow celebrity who might be claimed for medicine is Sir Joseph Hooker, the famous botanist who for many years was the presiding genius at the Royal Gardens, Kew. He took the degree of Doctor of Medicine at Glasgow in 1839, and, like his friend Huxley, served for some years as a surgeon in the Navy. Hooker was also an intimate friend of Charles Darwin. Of Sir William Gairdner, late Professor of Medicine at Glasgow, something was said in last week's letter. Though he now lives at Edinburgh, his name must always remain associated with Glasgow where he did much to form the minds of successive rising generations of medical men.

The temper of the profession is gradually rising as it recognizes more and more clearly that the slights put by the Secretary of State for War on the Medical Service of the Army are part of a fixed policy. How the Director-General, Dr. Jameson, was driven from office has already been related. Since then various incidents too petty to chronicle, but none the less irritating to those concerned, have occurred, and it is plain that Mr. Brodrick is for some inscrutable reason of his own at war with the doctors. The result is that there are no candidates for commissions in the Service. There is in London a physician whose special line of business is the "cramming" of men for the Army examinations. Practically all of them go through his hands, and the authorities of the Medical Department have thus been able to form an accurate forecast of the numbers likely to present themselves for the various services. At present there is said not to be a single man preparing for either the Army or the Navy; and there are only five for the Indian Medical Service which a few years ago attracted many ambitious men. Such are the consequences of the

profound distrust which has been bred in men's minds by the attitude which the Government has thought proper to assume towards the medical officers in the service of the Crown. The War Office in particular needs to be continually reminded of the fact that, while the Army cannot do without doctors, the medical profession can perfectly well do without the Army.

As one way of expressing its feelings on the subject, the profession is to give a complimentary dinner to the late Director-General of the Army Medical Service. It is intended to make it fully representative of the profession in Great Britain, and as the movement has already received the approval of the Presidents of all the Colleges and of the heads of the profession in the three kingdoms, its success may be regarded as assured. Though not professedly a manifestation against the Secretary of State for War, the dinner is in reality designed for that purpose. It will in fact be a declaration of war between the profession and Mr. Brodrick. The issue can scarcely be regarded as doubtful for the profession has the Secretary of State virtually at its mercy.

It was mentioned in a previous letter that the antivivisectionists are once more on the warpath. They are trying to induce charitable persons to withhold subscriptions from hospitals on the avowed ground that some of the physicians and surgeons on the staffs of those institutions are or have been vivisectors. Even this, as a bald statement of fact, is likely to mislead the public. But the philozoic fanatics go much further than this by insinuation, for they speak of "living human beings" in hospitals, being handed over to the tender mercies of "physiologists," obviously with intent to produce the impression that patients are used for experiment. They have "sandwich-men" parading the streets with gruesome pictures of mutilated dogs, etc., in the lurid style of the low prints which try to make the public's flesh creep by illustrations of the latest murder. I fancy our antivivisectionist friend are overdoing it. At the Athenæum Club the other day, Lord Coleridge, ex-President of the National Antivivisection Society, was black-balled in a most signal manner; he got 68 "pills" in a total vote of about 240—probably a record. The Athenæum is our leading club in respect of the literary, scientific and personal eminence of its members, and therefore it is regarded as a social distinction to belong to it. Lord Coleridge's rejection was brought about by the "doctors" in spite of the strenuous support of bishops, deans and judges with which the Club swarms.

The King has "honored" the Royal Medical and Chirurgical Society by signing its roll. His Majesty is already a Fellow of both the London Colleges, so that he may be claimed as a "doubly qualified" member of the medical profession. By the way, people are noticing more and more his strong resemblance in face to Henry VIII. A further coincidence is that "Bluff King Hal" was, according to Froude, one of the best physicians of his day; he was likewise the founder of the Royal College of Physicians of London of which his descendant (for our Royal family lays great store on its supposed possession of an infinitesimal portion of the blood of the older Kings of England) is now an ornament.

TRANSACTIONS OF FOREIGN SOCIETIES.

German.

SPINA BIFIDA OCCULTA—SPINAL PARALYSIS IN CHILDREN—BABINSKI'S SIGN OF NERVOUS DISEASE—EARLY TABES DORSALIS AND SYPHILITIC GUMMA—CARCINOMA OF THE NASOPHARYNX—DIABETES AND TRAUMA—PERNICIOUS ANEMIA AND THE LOSS OF BODY ALBUMINS.

KATZENSTEIN, at the Berliner medicinische Gesellschaft, May 8, 1901, read a paper on the pathology of spina bifida occulta and presented several patients in whom he had been able to obviate or decrease the nervous symptoms by a resection of the membrana reuniens posterior, which had been the source of pressure upon the cord.

PLACZEK in a contribution on spinal paralysis in children gave the clinical and anatomical findings of a case of this class which after three months' suffering died. In the spinal cord the anterior gray horns were diseased practically throughout their length. In addition to this there were degenerations and even atrophy in the muscles and peripheral nerves. In the gray matter the ganglion cells were greatly degenerated and often entirely absent. In addition there was present a great vascular proliferation with a small-cell infiltration of the lymph-spaces about the adventitia. The glia had been split up but nowhere was it really proliferated. The white substance was everywhere normal. Upon these facts the contributor argued that between the two opposite sources of the disease, namely the ganglion cells and the vessels, he was inclined to think that the latter obtained.

L. MICHAELIS, at the Verein für innere Medicin in Berlin, May 6, 1901, showed the preparation of a brain-tumor taken from a young girl. During life the girl had shown Babinski's phenomenon in the right foot, hence the inference was made that the growth was in the left motor tract. It was found in the left medullary substances. From his observations in hospital practice he was led to the belief that whenever the Babinski sign is present there is an organic nerve-lesion behind it.

PLIHN showed the spinal cord and brain from a case of early tabes dorsalis. There was a cheesy connective-tissue mass grown upon the cord and upon the cortex of the brain. Examination showed that there were no tubercle bacilli in it. From this it was concluded that the nodes must be syphilitic, which makes the case a rare contribution to the cause of the disease, usually assumed as syphilis.

A. FRAENKEL presented a specimen of primary

carcinoma of the nasopharyngeal space which had extended by direct contiguity to the base of the skull and spinal column and finally led to the breaking off of the odontoid process. Death did not suddenly follow this accident. The chief symptoms were paresis of the various cranial and cervical nerves and very great pain. The effort of the patient had been to keep his head absolutely still, using his hands as support. The clinical diagnosis had been some form of bone disease, apparently caries.

LITTEN took up the relation between diabetes and traumatism and related the facts of a case in which he had been interested. In December, 1894, a gentleman fell on the sidewalk sustaining a severe injury to one hip which soon began to swell enormously. The next day pain of excruciating degree appeared and was followed by coma. He was then removed to the hospital where three per cent. of sugar was found in his urine. After ten days of uninterrupted coma the man died. The two questions for settlement are, was the accident the cause of death, namely, by first having produced the glycosuria, or did the sugar indicate a diabetes which was at the bottom of the whole history, making the coma entirely due to that? He felt that the answer to the former question must be negative on the grounds of the various details in the history and that the second question must be affirmatively answered.

STRAUSS said that in his experience he had seen several examples of alimentary temporary glycosuria produced by accident. He is of the opinion that trauma may induce a relative failure of assimilation of the carbohydrates. Jastrowitz stated that he had a patient in whom fear alone had caused a diabetes.

E. ROSENQUIST (Helsinfors A. G.) stated that for many years he had been studying pernicious anemia, especially botriocephalus anemia; and had long ago claimed that such anemia is accompanied by a great loss of the body albumin. Other authors had at once disputed this and held that when the albumin loss is very great there is always some other pathological process at the bottom of it. Various experiments by Strümpel, Eichhorst and others appeared to be the foundation of their theory, but to-day these observations would not be accepted as conclusive proof. In his native town he has had an unusually fertile field for observing bothriscephalus anemia, and the following are his results: In fifteen patients afflicted by the parasite, he found in eleven a great loss in albumins, ranging from 0.5 to 6.6 grams per diem, before the driving-out of the worm; after the elimination of the worm he saw from day to day a resumption of albumins. This restoration was not an absolute one, but with some variations was on the whole and in a general way a balance of the loss. This increase in the nitrogenous substances of the body also occurred when there was unfavorable dietetic surroundings. It seemed, therefore, that as soon as the worm is driven out the tissue-building forces of the body again become active. The loss in albumin is present not only on the part of the blood, but also in all the tissues. The explanation of this loss lies very likely in a poison given out by the worm itself. The anemia alone can not be its source. The question as to why in the regular presence of this toxic substance among so many patients suffering from the worms so very few show a pernicious anemia, may be fully answered by assuming an individual vulnerability. The number of red cells followed in regular proportion the degree of albumin loss, but in seven of his patients he noticed that there was hardly a change in the condition of the red cells. Whether this was due to a peculiar resistance of these red cells or to an increased activity in the production of the cells or to both combined could not be decided. He has also observed a similar state of affairs in three patients with kryptogenetic anemia, which also appears to be toxic in its origin. No distinctions between the two kinds are discoverable.

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

Fifty-Second Annual Meeting, Held at St. Paul, Minn., June 4-7, 1901.

SECTION ON DISEASES OF CHILDREN.

FIRST DAY—JUNE 4TH.

Chairman's Address.—This was read by Dr. Samuel W. Kelley of Cleveland, Ohio, who said in part: The advancement of the surgical side of pediatrics is very important, and has been slower in its developments than the medical. In the cases of children abnormalities are found and the same diseases that occur in adults are marked by different phenomena. All are aware what peculiarities surround operative work upon children; how ill they bear hemorrhage, cold, or prolonged shock, and how wonderfully they recuperate once the stress of the storm is passed. The surgeon should at least be required to extend his knowledge to diseases of children.

Measles.—Dr. J. B. Garber of Dunkirk, Ind., said in his paper that the poison of measles spreads by contagion from one person to another and is given off by the breath and secretions. The period of incubation is now well established, and is found to be about fourteen days from the time of exposure. The prodromal symptoms last about three days, and are associated later with catarrhal symptoms. Fever is always present, coming on as early as the second day; often remitting and rising again just preceding the eruption; laryngeal cough, drowsiness, loss of appetite and vomiting usually occur; sometimes convulsions. On the third or fourth day the eruption appears, usually preceded by Koplik spots which

disappear as the eruption progresses. When the rash begins to disappear, if the fever continues, complications are to be feared; for in complications lie the danger of measles.

Dr. Slagle stated that he rarely found Koplik spots. Second attacks of the measles have not been common in his experience. Usually when a second attack is diagnosed as measles, it has been found that it was German measles.

Dr. J. M. Postle was sure that he had seen true measles recur in several cases, and had found benefit in the treatment of measles from the internal administration of suprarenal glands.

Dr. Barber called attention to the danger of endocarditis following measles. Dr. Townsend regarded enlargement of the post-auricular glands as pathognomonic of German measles.

Pathology and Treatment of Pertussis.—Dr. J. M. Postle of Hinckley, Ill., presented the next paper in which he said that pertussis is a toxic neurosis produced by a bacterium probably by that of Czaplewski, Hensel and Koplik, invading the tissues beneath the mucous membrane of the respiratory tract. These bacteria produce a toxin which has as the point of special selection for attack the nerve-cells governing expiration. These nerve-cells are depressed with resulting clonic spasm of the expiratory muscles. Excess of carbonic-acid gas in blood produces powerful stimulation of the nerve-cells governing inspiration, at the same time, partially or completely destroying the toxin. Children, therefore, when playing around gas works have whooping-cough lightly. The treatment consists of the administration of suprarenal glands, strychnine, or any preparation of nux vomica which may be given hypodermatically or by the stomach, and should be pushed almost to the full limit or slightly toxic effect.

Antenatal Treatment of Hemophilia.—This paper by Dr. J. W. Ballantyne of Edinburgh, Scotland, was read by Dr. Darnell. Hemophilia is clearly and persistently hereditary. The probability is that male offspring will be hemophilic, though the female offspring usually escapes. There is a presumptive diagnosis of antenatal hemophilia when such a woman is pregnant with a male infant. The following case is reported; Mrs. C., thirty-four years of age; third pregnancy; tall, well built; rather spare with black hair, sallow complexion; has always lost much blood at her menstrual periods and had postpartum hemorrhage after both previous confinements. She has a distinct family history of hemophilia and the first child at birth was white and anemic but is a marked "bleeder" having nearly succumbed several times during the cutting of teeth. The second infant, a male, showed hemorrhage from the umbilical cord at birth and died at the age of twelve months during dentition, the cause of death being returned as cerebral hemorrhage. When the mother became pregnant for the third time, I advised that chloride of calcium be given to the mother trusting that it would pass through the placenta and reach the fetal tissues, although theoretically, the hope of success was small; iron, arsenic and strychnine were also administered in order to improve the general health, increase the tone of the uterine muscle, and lessen the risk of postpartum hemorrhage. This treatment was carried out for three months. On October 3, 1900, a male child was born, red, mottled, and healthy in appearance—indeed, in all respects normal; there was no hemorrhage from the cord, no postpartum hemorrhage for the first time in the mother's obstetrical history, and she was able to nurse her infant. The child has never had any bleeding, and did not bruise like his brothers. There are circumstances which encourage the opinion that, after all, the treatment in this case may have something more than a coincidental relation to the healthy state of the third infant.

SECOND DAY—JUNE 5TH.

Symptoms of Typhoid Fever in Infancy and Childhood.—Dr. J. P. Crozer Griffith of Philadelphia read this paper. The symptoms of typhoid fever in children differ in many respects materially from those seen in adults. To insist that the cardinal symptoms must always be present would lead us into frequent errors in diagnosis. The affection is far from rare in infancy and the failure to recognize it is rapidly disappearing, because we are more on the alert for it, and have the serum reaction test to aid in the diagnosis. The peculiarity of the onset of typhoid in children is its indefiniteness. The great degree of malaise and fatigue is absent. There is loss of appetite, slight indisposition and some headache. The temperature does not abate and, although the child scarcely feels ill, the diagnosis of typhoid fever may be made by exclusion. The child is sent to bed on general principles and not because it wants to go. In the second class of cases the onset is sudden, with vomiting and fever from the start and the rash is discovered. Perhaps only the Widal reaction will differentiate the disease from indigestion, enteritis or influenza. Another peculiarity is that the course of the disease is shortened; abortive cases are common, it is milder than in adult life and the mortality lower. Enlargement of the spleen is usually present but not usually discovered. The pulse is often unusually slow as compared with the rate which one would expect for the same elevation of temperature in other diseases. The temperature curve is similar to that in adults. Not infrequently it rises rapidly without the step-like ascent. Often it remains high without the tendency to morning fall. Towards the end of the attack it falls often with much greater rapidity

than in adults. Indeed the fall may be almost critical at times. The tongue is not as liable to become dry and parched. Diarrhea is more liable to be absent than present. Abdominal distention is not often a troublesome symptom, though often present. Hemorrhage is of rare occurrence. When it does occur it is usually in later childhood. Perforation is also of uncommon occurrence, the infrequence of these two symptoms probably being due to the less pronounced development of intestinal lesions. One of the characteristics is the tendency of the nervous symptoms to predominate over the intestinal. Slight delirium is common, especially at night. A certain degree of apathy is very frequently present especially in very young children. As a rule, the diagnosis can be easily made, but sometimes typhoid fever begins in children with all the appearances of acute leptomeningitis and leads for a time to an entirely erroneous diagnosis.

Diagnosis of Typhoid Fever in the Laboratory.—Dr. John Lovett Morse of Boston protested against the separation of laboratory and clinical methods in the diagnosis of typhoid fever. They should not be thought of separately but together. Both are fallible and both should be used understandingly. The value of the various laboratory tests are unequal. All have their limitations. The Widal reaction is present in 95 per cent. of all cases of typhoid fever. It seldom appears before the second week, but negative tests are very strong evidence against typhoid fever. The reaction may persist in the blood as long as twenty-nine years after recovery from typhoid; hence a positive reaction in the absence of other symptoms is not diagnostic of typhoid, unless one can be sure the patient has never had typhoid. A negative reaction followed by a positive reaction in a dilution of one to fifty is absolute proof of typhoid. The Widal reaction appears in children under the same conditions as in adults, but appears earlier, is feebler and persists for a shorter time than in adults. In infancy the reaction is of less value than in older children and adults, because it may be transmitted to the infant through the mother. When transmitted through the milk it does not persist for more than a week. Examinations of the stools have shown the presence of the typhoid bacilli in from three to five days after the patient has taken to his bed. The test is nearly equal in value to the Widal reaction. The examination of the feces requires a complete laboratory and much expert knowledge and is therefore not practicable for the average general practitioner. Typhoid bacilli may be found in the urine in from twenty to thirty per cent. of the cases, but not until the later stages of the disease. The rose spots almost invariably showed the presence of the bacilli five or six days before the appearance of the Widal reaction. The diazo-reaction is simple and can be made by any one, but as it is also present in tuberculosis, septicemia and other febrile diseases, the very conditions with which typhoid is easily confounded, it is of comparatively little value. The leucocyte count is important and is subnormal throughout the entire course of the disease. An increase in the number above normal means some complication, such as hemorrhage or inflammation or some outside influence, such as cold bathing. If a differential diagnosis is desired between malaria, examination of the blood for the plasmodium malariæ will clear up the doubt. If meningitis is suspected, lumbar puncture should be resorted to. The author concludes that the Widal reaction and the leucocyte count are the most important of the laboratory methods in diagnosis of this disease, because they are practicable and easily carried out, other tests, although perhaps more accurate, are at the same time impracticable.

Treatment of Typhoid Fever in Children.—Dr. Henry E. Tuley of Louisville, O., considers trained nursing of great importance. It is next to impossible for a mother beset with the cares and responsibilities of a household, especially if there are other children, to care properly for a patient with typhoid fever. The dietetic treatment is important. Fresh milk is unsuitable for a regular diet; broths may be given, whey, predigested milk, some of the cereals and the concentrated foods. No regular routine of medicinal treatment is possible. The treatment should be largely symptomatic, only such medicines being given as are absolutely essential. No antipyretics should be given internally. The condition of the heart should be zealously watched, and strophanthus and strychnine administered if it begins to flag, while alcoholic stimulation should be reserved for administration late in the disease. In hydriatic treatment excellent results have been obtained. Full baths, however, are rarely possible in private practice, but frequent and prolonged sponging gives almost equally good results.

Dietetic Treatment of Typhoid Fever.—Dr. Louis Fischer of New York said that the toxemia of the disease shows itself principally on the heart and circulatory system, which should be carefully watched and stimulated as demanded. He then gave a résumé of foods he had used with success in a series of typhoid cases. Foods should be peptonized and, if necessary, sterilized or pasteurized. Salines have proven of great value, especially the infusion of saline infusions *per os* or *per rectum*, and if coma prevails they should be used by hypodermoclysis. Albumin and salt also may be administered subcutaneously. Plenty of water should be given to drink, and this is some cases may be improved by having it charged with carbonic acid gas. If severe vomiting and gastric disturbance exist the food should be given by the rectum. On the other hand, if severe diarrhea and tenesmus be present, feeding

should not be given by rectum, but through the stomach.

Multiple Gangrene Associated with Cholangitis Complicating Typhoid Fever.—I. A. Abt, M.D., of Chicago, reported the case of a female child, aged twenty-one months that came under observation on the fourth day of its illness. The father was in the hospital with a well-marked typhoid. Examination on admission shows the tongue coated, the abdomen tympanitic, the spleen palpable and enlarged. The Widal reaction was positive. Temperature was 103° F., and there was a slight edema of the extremities. About ten days after admission it was noted that furuncles appeared on the scalp and over the scapula of the left side. After the child had been ill about two weeks, an eruption appeared on the back, neck and extremities. At first, papules appeared; later these became pustules, and in a very short time appeared as areas of gangrene. Summing up the affection of the skin, the following features present: In the course of a febrile disease there developed over the body a number of lesions in the following order: Red macules, papules, flaccid vesicles, and blebs. Also pustulated or crusted papules, umbilicated vesicles, and ulcers with a dirty, grayish, moist slough. The ulcers have steep margins, are mostly oval in shape, and vary from the size of a split pea to a penny. The whole eruption impresses one as a multiple embolic process in the vascular system of the upper corium leading to gangrene of the type called infectious multiple gangrene. Autopsy showed the gangrenous areas in the skin which have already been described. The pericardial sac contained fluid. The myocardium was pale and flabby; the lungs were edematous; the spleen was enlarged and showed presence of infarcts; the kidneys were negative; the liver was large, light brownish in color, and distinctly soft. Over the entire surface there were a large number of whitish areas, about the size of the head of a pin. These were surrounded by a red border, and were irregularly scattered throughout the organ. Microscopically, these areas are seen to be due to a necrosis of the parenchyma adjacent to the interlobular vessels. A study of these sections from the liver shows an inflammation of the bile passages, an angiocholitis. The liver also shows the presence of an adenoma.

Treatment of Temperature by Drugs.—Dr. Edwin Rosenthal of Philadelphia in this paper said that a thorough knowledge of the febrile movement, its cause and its dangers, is as necessary as of the drugs to be used. In the choice of remedies, one must use a surprising amount of judgment. The bad influence of too much drug treatment cannot be questioned, but it is a misleading delusion to say that we can always avoid it. Careful investigation proves that no special specific virtues can be designated; for this reason I cannot find one drug which has stood the test of time and impartial judgment. While all the ordinary coal-tar derivatives have been thoroughly tried, none of them are allowable.

Discussion.—Dr. Victor C. Vaughan of Ann Arbor, Mich., drew attention to the fact of typhoid fever occurring less frequently in children than in adults, and explained this fact by the child not getting around and drinking water from so many sources as an adult; this is the reason why typhoid infection occurs less frequently in women than in men. It has also been said that typhoid fever occurs less frequently in cases of pregnant women; cases of typhoid fever seem to be less severe when the infection is a mixed infection, for when there is a mixed infection with the colon bacillus an irritative diarrhea is set up which causes the intestinal canal to be regularly drained of its poisonous contents. It is high time to stop experimenting with antipyretic drugs. If these dangerous drugs are to be used, let us make our experiments on animals and not on human beings. The only way to reduce temperature is by the cold bath. The occurrence of multiple gangrene is an exceedingly interesting matter, and has been found in malaria, smallpox, etc., as well as in typhoid. The fact of being able to diagnose these things by a positive discovery of the bacillus gives us now a clearer insight into the disease.

Dr. Charles Douglass of Detroit found the medicinal treatment of typhoid fever very unsatisfactory; temperature may be controlled entirely by baths and proper regard to the diet. The diet should always be kept down to the point where there is perfect digestion, then fewer baths and less medicine are necessary; he does not agree with the popular idea with regard to the use of calomel in small doses; his experience is that cases which are allowed to preserve quiet bowels continue to a steady recovery; the temperature goes steadily down without purgation if proper care is used in the diet. Feeding should be such as to make the stools normal in character and free from any bad odor.

Dr. F. Wood thought we frequently fed our typhoid patients too much; less food, less medicine and more water give better results than overfeeding. It is very important to provide perfect quiet for these cases. Do not allow them to become restless, talk too much, or be bothered. Do not urge them to eat at all unless they want to eat. Oftentimes injudicious use of milk will cause tympanitis. If hemorrhage occurs, perfect quiet should be maintained by the use of morphine. Quiet is more important in this complication than any medicine.

Dr. Head pointed out the great value of the leucocyte count as an aid to the differential diagnosis between meningitis and some of those forms that come on like appendicitis.

Prolonged Intubation.—Dr. Edwin Rosen-

thal of Philadelphia read a paper upon this subject. With the advent of diphtheria antitoxin the operation of intubation obtained a fixed position. To the antitoxin is also due the very many accurate results obtained in the study of the progress as well as the sequel of diphtheria, especially of the laryngeal type and those most serious cases requiring intubation. By this procedure we are not only able to relieve the impending suffocation, but we cure. Where before we were expectant, now we are more certain. The tubes should be removed within five days unless it be removed by expectoration before and then be no longer required. If the patient requires the tube longer than this time, it will be impossible to state when it may be safely discontinued. Cases in which the tube must be replaced, even after a week, should be considered abnormal and should be classed under the head of prolonged intubations. Welch reports a case in which the patient required the tube eleven months, finally dying of suffocation. Engelmann and others report the same results.

A case is reported in which the tube was worn, being removed occasionally, for a period of thirty-six days.

Gonorrhea in Boys.—Dr. A. L. Wolbarst of New York called attention in this paper to the frequency of this disease in young boys, twenty-two cases ranging from eighteen months to twelve years of age having fallen under his personal notice. The author speaks in this connection of the great value and importance of circumcision. Every case of gonorrheal urethritis he says offers a most eloquent plea for the circumcision of all male infants. Complications occur in young boys similar to those of adult cases, after the disease has lasted several days. Posterior urethritis, prostatitis and epididymitis have occurred in these cases. There was a total inability to pass urine in one case. The disease also lasts from four to six weeks as in the adult, though the prognosis as to complete and early recovery seems usually to be better in children. Prophylaxis consists in the education of the people to the dangers of the disease. Stringent laws should also be passed for the protection of children.

Discussion of Gonorrhea in Boys.—Dr. Edwin Rosenthal of Philadelphia said gonorrhea is seen so frequently that it might be looked upon as an epidemic. Where the gonococcus is present, we can positively determine the existence of the disease and often trace the guilt of the crime where it occurs in the young child. The overcrowding in tenement districts is responsible for perhaps the most of it in the poor. Dr. Clifton Scott did not think that it was confined to tenement houses. There is a great need for education even among men and women of the better classes. When people come to understand that there are not only vicious men but also vicious women, these questions will be looked at in a different light from the present. For the dissemination of gonorrhea among young boys, servant girls and maids who force connection upon them and thus give first lesson in vice are largely responsible. Formerly it was not thought unsafe when sleeping accommodations were limited by reason of visitors or for other causes, to allow the young boy of ten or twelve years of age to sleep with the maid. Often with result that the innocent boy had been infected with this vicious disease. Dr. C. F. Wahrer referred to the fact that it was not such an unusual matter for children under the age of puberty to indulge in sexual gratifications. A case came under his view in which a boy of thirteen was invited by one of his companions to meet a certain girl of sixteen years of age at a barn where he was shown how by his companion and was then given his first lesson. When the matter was traced up, the girl confessed with unblushing effrontery that she had been engaged at this sort of thing for a long time and spoke of the special enjoyment it was to instruct the new subject.

Dr. A. C. Cotton referred to the astonishing ignorance of the laity, even well informed people, upon this subject. The number of alleged assaults upon little girls is remarkable in number and it is astonishing how many causes of gonorrhea occur in small children. One source of this in the cases of the little girls is where some brutal man while he does not lacerate or cause an injury to the little child, seems to get a peculiar gratification in rubbing his organ against the little one's thighs. The girls of course develop gonorrhea. Intercourse among children before the age of puberty oftentimes occurs. In his dispensary service there was a string of eighteen or twenty little girls whom we found on investigation had come from the same neighborhood. They were of a variety of nationalities. On tracing the matter up it was found that a ten-year-old boy with one of these mature and vicious faces and of course with complete ignorance of what he was doing, had been infecting these eighteen or twenty little girls. Mothers and fathers, especially the latter, with an old gleet not uncommonly infect the innocent child by allowing them to use the same chamber that they have previously used themselves.

Dr. Cook thinks that the time has arrived when the public should be educated on these matters and when they should all know the life history of the gonococcus outside of the human body. Prophylaxis and a thorough knowledge of the dangers of the disease should be taught thoroughly to every patient who comes for treatment. Many cases spread the disease innocently laboring under the delusion that they are cured themselves when as a matter of fact, latent germs exist within their own bodies.

The Pubescent School-Girl.—Dr. Wm. Edgar Darnall of Atlantic City, N. J., read a paper upon this subject in which he dwelt upon the great importance of the period of puberty in girls. The average girl at puberty is at school and under the modern high pressure system is straining every effort to keep up with her duties and using up all her vitality in mental pursuits. Her physiologic processes make even greater demands on the girl than those of the boy do on him. In addition to performing the same work as her brother in school, she is also expected to acquire the accomplishments, such as music and painting at an early age when she ought to be out in the open air. These years are very needful for the perfect development of the sexual organs, and the woman's whole future health and happiness may hang upon the result. Hysteria, irritability, neurasthenia, and sexual incompetency are the outcome, and the girl although bright, intelligent, and accomplished, perhaps enters life the possessor of a large outfit of headaches, backaches, and other evidences of physical unfitness. Painful menstruation is the bane of the existence of the school-girl. Chapman thinks fully seventy-five per cent. who have reached the pubescent age would give a history of painful and scant menstruation. Engelmann tabulated five thousand cases and found about sixty-six per cent. with more or less menstrual suffering. The fact of the pains being increased with hours or intensity of study, with worry and emotion, and being diminished or ceasing entirely without treatment of any kind during vacation, is a fitting commentary on the underlying causes. The girl's life during the oncoming of puberty should be carefully watched, and her studies restricted if necessary; in some cases she should be taken from school altogether for a year. Especial attention should be paid to properly regulating the functions of the bowels and bladder. All stimulants and excitements, late hours and children's parties should be prohibited. Plenty of sleep should be had by them, proper diet supplied and the habit of eating between meals forbidden. Undue excitement, mental worry or anything that may divert the vital forces from the great work they are performing in the development of a perfect woman should be jealously guarded from the pubescent girl, as this short period is perhaps the most important to her future happiness.

Speech as a Factor in the Diagnosis and Prognosis of Backwardness in Children.—Dr. G. Hudson Makuen of Philadelphia said in this paper that speech is a tool of the mind. Children are dependent upon good speech for the normal development of their faculties. The best method of arriving at an approximately correct prognosis in cases of backward children is to apply the speech test, or, in other words, to ascertain by careful study and experiment to what extent the faculty of speech may be improved. It will be found usually that those who are susceptible to training in what may be called the refinements of speech are the ones who gives promise of the best results and that the possibilities for general improvement will be proportional to the capacity for speech development.

Physical Culture in Children; the Objects to be Obtained.—Dr. J. Madison Taylor of Philadelphia read an important paper upon this subject. It should be clearly understood at the outset, he said, what is meant by the term physical culture. Two objects aimed at are, first, to raise the general bodily efficiency of the child as found in the schools by aiding the natural spontaneous processes of growth and development, both mental and physical; and, second, to assist in improving the conditions of those who are found to be below par in any direction and bring them up to the standard for their age and conditions, so that they may progress in the same degree as ordinary individuals. It is essential that all school-children should have the benefit of skilled medical supervision during their growth. Defects in the organs of special sense, notably the eye, ear, and nasopharynx, may be enumerated as some of the causes and must be dealt with by the specialist. Relatively local disorders are capable of producing great functional disorder when the physique is a little below par, whereas, if the general mechanism of the body is good, they cause very little mischief. The first main object of physical culture for children therefore is to teach them to assume right normal attitudes. Physical culture teachers are usually neither physicians nor physiologists and often not good observers. A simple rule which can involve little error is to let the shoulders alone, free from tension, but keep the back straight and hold the chest as far up as possible and keep the abdomen held in. Then the arms and shoulders are free from constraint and can be moved in any direction. Almost the most important factor is the position of the pelvis which should be maintained as nearly as possible at a level. The subject of breathing is one about which many fallacies are taught. The diaphragm is a muscle of unrecognized importance and is capable of high training and development, just as are the muscles of the arms and legs. The object in right breathing is to obtain the fullest degree of elasticity of the thorax and the greatest degree of freedom.

Discussion on Prolonged Intubation.—Dr. Shurly of Detroit referred to 240 cases of diphtheria with a mortality of 60. Of this number 8 were intubated. Prolonged intubation may be classified as those cases in which the tube remains in position more than six days, ordinarily it should be removed on the fourth day. In these cases 3,000 units of antitoxin is always given immediately. Of the

eight cases intubated all recovered except one. The causes of bad results are usually traumatism or cicatricial bands. Plated tubes should not be used. Dr. Golden uses the suprarenal glands wherever there is edema.

Dr. I. A. Abt thinks the sooner the tube can be taken out the better it is for the child. It should be removed every morning, to allow it to remain in continuously causes edema, trauma, etc. His custom is to remove it in twenty-four hours if possible. There are cases in which a tube cannot be introduced into the larynx. This may sometimes be due to the fact that all of the tubes sold at the shops are not properly made.

Prevention of Pulmonary Tuberculosis in Predisposed Children.—Dr. John A. Robison read this paper. Before the discovery of the bacillus hereditary tuberculosis was supposed to be of great importance, but in the light of modern scientific inquiry infection has supplanted heredity. Direct transmission is extremely rare. Cases of tuberculosis occurring during childhood are in nearly all instances due to direct infection, so many statisticians claim, though an equal consideration of the two factors heredity and the bacillus I think must be maintained. Healthy individuals possess certain degrees of immunity to tuberculosis, as well as other infectious diseases, and this immunity is transmitted to the offspring. If one parent is tuberculous the immunity is weakened. If both parents are tuberculous, the immunity is lessened to a greater degree and there is engrafted on the progeny a cellular nutritional weakness. Children of tuberculous parents are easily effected both directly and indirectly. Preventive treatment should commence with the ancestors. The education of the people would mean the improvement of the coming generations. A child should never be suckled by a tuberculous mother. As the babe grows the diet should contain more fat. Early a state for hydrocarbons should be cultivated. Pure candy in moderation is beneficial to growing children if given after, not between, meals. Children do not drink enough water. It is a great aid to nutrition and acts as a solvent for the effete material in the body. The diet should contain plenty of nitrogenous food. The period of puberty is a critical one. Enforced ignorance of the sexual laws oftentimes allows youth to fall into vices which weaken the cellular and organic structure of their bodies.

Hygiene.—Better hygiene should be secured in our schools. Those with a tendency toward tuberculosis should choose vocations which necessitate them to be out of doors a large part of the time.

Discussion.—Dr. Wood thought that there was a great necessity for the stricter enforcement of laws regarding the marriage of tuberculous people. Dr. Work referred to the supreme importance of proper clothing. People should change their clothing as the weather changes. The two great objects of clothing are equal warmth and equal pressure. Dr. Slagle pointed out that tuberculosis begins in the stomach through the influence of impaired nutrition, with the consequent weakening of the power of resistance.

Protracted Influenzal Pneumonia in Infancy.—Dr. Frank X. Walls of Chicago in his paper stated that infants are in a high degree immuned from influenza. Influenza, however, in infants frequently runs into protracted pneumonia. Nursing children are almost absolutely immuned even though their mothers be seriously stricken with the grip. This immunity is explained by assuming that a potent antitoxin is eliminated in the maternal milk. Infants artificially fed are more susceptible to this disease as well as others. Comby reports a case of grippe in an infant only seventeen days old. Relapses among children are not rare. The symptoms often come on very much like severe gastro-intestinal infections. Later involvement of the respiratory tract occurs. Cough is at first short, but later increases in intensity until it is paroxysmal and continuous similar to that of pertussis. Breathing is rapid and hurried and jerky. More or less coryza is present in most of the cases. Oftentimes inflammation of the middle ear, rupture of the drum and discharge of muco-pus complicates matters. The sputum was examined in all cases and the influenza bacilli were demonstrated. The pneumonia was clinically lobar. The consolidation was slow in development with diffuse bronchitis over the remainder of the lung. The nervous system was signally exempt in the cases coming under the author's notice. The occurrence of an exanthem closely simulating the scarlatina rash, which has been pointed out by many authors, were wanting in the cases under consideration. A diagnosis is sometimes difficult and may easily be confounded with gastro-intestinal infections, ordinary bronchopneumonia, malaria, sepsis or miliary tuberculosis. There is no specific treatment for influenza, but the little patient should be kept quiet and be fed on a nutritious diet suitable to the digestive capabilities of the infant. Nauseating cough mixtures should be avoided. In the event of cardiac or respiratory failure, stimulation should be given as indicated. Cold applications to the skin frequently act in a happy manner in cases of threatened suffocation.

Congenital Malformations.—Dr. Carl Beck of New York presented a very interesting paper on this subject and showed numerous Roetgen-ray photographs to demonstrate the cases reported. The most frequent abnormality of the upper extremity is polydactylism. Congenital deficiencies are naturally hard of correction, but even in such cases surgery is not without resources. Eiselsberg has successfully transplanted, for instance, a toe to

the hand. The Roentgen-rays are manifestly of great value in determining just what are the conditions present.

Membranous Colitis.—Dr. Charles Douglas of Detroit, Mich., said in his paper that membranous colitis occurs most frequently in infants over six months old and less than two years. The stools resemble those of catarrhal enteritis, except in the amount of blood. The only feature which establishes a diagnosis is the appearance of the pseudo-membrane. The severity of the attack and the gravity of the prognosis are in proportion to the amount of mucus passed daily and the length of time it continues. If longer than ten days, the prospect of recovery is not good. It is rarely seen in nursing infants. A microscopic examination of the membrane shows that it is structureless and like a mass of fibrin with no mucus or epithelial cells. The cases presented showed that different bacilli have the power by their irritative qualities and the result of their toxins to form this false membrane on the mucous membrane of the bowels. It is important to recognize that the character of the food is the principal etiologic factor in the beginning of this trouble.

Case of Ureteral Calculus.—Dr. W. W. Keen of Philadelphia said that in this case the calculus was accurately located by the X-rays before the operation was performed. The patient gave the usual history of stone in the ureter and since a recent attack of scarlet fever the paroxyms of pain on the left side have been more frequent and severe. The patient was ten years old. On admission the left side of the abdomen was so painful that a diagnosis was impossible as to location of the stone, though the diagnosis of calculus which had already been made by his physician was perfectly clear. The photograph shows a calculus about one-half the size of the last joint of the little finger in the left ureter a little below the level of the pelvic brim near the bladder. There was considerable difficulty in finding the ureter at the operation as it was imbedded in a hard mass in which the ureter was apparently lost. On examination the stone was found to be dark in color with a reaction for mucin; the shell is of calcium phosphate with a trace of organic matter. On the opening of the ureter about one-quarter of an ounce of urine escaped from the somewhat hydronephrotic kidney. The ureter was packed with iodoform gauze which was removed on the second day and recovery was uneventful.

Discussion.—Dr. C. L. Leonard stated that he had skiagraphed forty-seven cases of stone in the ureter. In most of these cases the stone had been subsequently passed so that it is advisable to wait in most cases unless the stone is large rather than resort to surgery.

Dr. Clifton Scott agreed to the extraordinary value of the X-ray in these cases but thought its value was negative as well as positive. He had operated on a case diagnosed as calculus from the clinical symptoms. The diagnosis seemed perfectly clear, but at the operation it was found to be an endothelial growth and no calculus at all.

Dr. Keen referred to four cases in which he had operated for stone and the stone had not been found.

THIRD DAY—JUNE 6TH.

Diabetes Mellitus in Childhood.—Dr. A. C. Cotton of Chicago reported a very interesting case and called attention to the care with which these cases should be managed. He also pointed out the importance of examining the urine as a part of the routine practice in the diagnosis of the disorders of childhood, so rarely done by the average physician. This perhaps accounts for the seeming rarity of this disorder in young children. That heredity plays a rôle in the predisposition of diabetes, there seems to be little doubt. It seems to the writer that the inclination of many to attribute to the infectious diseases of childhood a casual relation to diabetes is not based upon careful analysis of the evidence and that the glycosuria following such diseases is usually of the transient class. The advanced case of diabetes presents a picture of extreme inanition, emaciation, muscular weakness, dry skin and hair, brittle nails, extreme irritability and extreme sensitiveness to cold, while the urinary symptoms are always present. Furunculosis and other skin lesions rarely appear in children. No routine treatment is applicable to even the majority of cases. At the present time the regulation of the diet seems to be the most important therapeutic measure. The death certificate follows hard upon the diagnosis and the rate of mortality is very high. Elimination is most important in these little patients, while they should be protected from mental strain, shocks, frights, trauma and exposure to inclement weather. The importance of an early diagnosis is evident since success in treatment bears an inverse ratio to the chronicity of the disease.

Dr. C. F. Wahrer emphasized the view that medical treatment had little or no influence on the progress of diabetes, nor could much more be expected from the diet. Both may have some effect in improving things and holding the disease in check, but not in curing it. He could not recall any cases under ten years of age which had recovered.

Albuminuria in Infancy and Childhood.—Dr. John R. Rothmell of Chattanooga, Tenn., read a paper on this subject. Diseases of the kidney in infancy and childhood are chiefly hyperemias and nephritis following the contagious diseases, especially scarlet fever Physiological albuminuria may occur at any period of infancy and childhood. It is most common between the ages of five and fifteen

years and rarely persists, while albumin in the urine does not necessarily indicate serious organic disturbance in the kidney, yet its presence, however slight, commands the utmost watchfulness and care. Albumin is found in the urine after a rich meal, heavy muscular exertion, intense emotion and cold bathing. Even when every other constituent of the urine is normal and functional albuminuria can be differentiated, yet these cases require the most careful consideration, for sooner or later, it may be after months or years have passed, grave lesions may show themselves and we wakes up to the fact that insidious degeneration has been going on in the meantime. It is very important, therefore, to decide whether the albuminuria was simply functional or due to organic change. The prominent symptoms are albumin, high specific gravity and edema. These symptoms are especially found in interstitial and chronic parenchymatous, active hyperemia, catarrhal nephritis, parenchymatous degeneration, passive hyperemia, and acute nephritis. In acute nephritis the amount of albumin depends upon the extent of involvement of the glomeruli, and the amount of casts depends upon the extent of tubules affected. To met the symptoms of edema and ascites and to treat them require some thought concerning the condition of the patient. When uremia exists, diaphoretics, diuretics and cathartics are indicated. Podophyllin, compound jalap powder, and other watery purges may be used. Hot baths and hot packs should be used to cause profuse sweating. Where ascites is extreme tapping is of value. For stimulation teaspoonful doses of infusion of digitalis every four hours for a child of five years old can be given.

Diagnosis of the Backward Child.—Dr. A. W. Wilmarth of Chippewa Falls, Wis., read this paper. He said the estimate of mental strength must be formed from the power of attention, the strength of memory, the efficiency in the method of reasoning which comes to us all instinctively in our early days, and which is known as "common sense."

Plea for the Backward Child.—Dr. C. F. Wahrer of Fort Madison, Iowa, contended in his paper that the very bright child is taken as a standard of comparison instead of the medium child. There is often nothing the matter with the child who is considered slow. His powers are latent and may be really developing in a direction different from the course expected. It is not how early, but how well a given person develops and how effective are the results of his development.

Hygiene of Early School Life.—Dr. J. Noer of Stoughton, Wis., insisted on a more active control of school curricula by physicians and the impossibility of advantageously subjecting all children to the same physical and educational rules.

Discussion.—Dr. Work thought that the cry that came up from all parts of the country proved that there was something radically wrong with the school system and it was not confined to any one locality. The classification of scholars should be according to their intellect and schools should be selected for children which were fitted to their needs. He was particularly impressed with some of the facts brought in Dr. Darnall's paper with regard to the close-fitting and often unhygienic dress of the girl. The two important factors in all dress are equal pressure and equal warmth. Another most important factor is the food of the child which often is badly and carelessly prepared. Regular habits should be taught the child with regard to baths, elimination, eating, etc. Every child should be taught what the organs of the body are, and for what purpose they are intended, and how they should be taken care of and how they may be injured. If a child goes to school without a proper evacuation of the bowels or bladder, he cannot study properly. His intellect is dull and clouded. If a child does not have plenty of water to drink, his mind will be more or less affected from the lack of it. The greatest trouble in most of the schools is not so much with the school or with the child. It is because there are not trained mothers who understand these things themselves to teach the child at home. The duty of the profession is to educate the mothers of the community how to take care of the health of school children.

The officers elected for the ensuing year were as follows: H. H. McClannahan of Omaha, Neb., Chairman, and Frank X. Walls of Chicago, Secretary. The Section chose as their two delegates Dr. A. C. Cotton and Samuel W. Kelley.

BOOK REVIEWS.

OBSTETRIC AND GYNECOLOGIC NURSING. By EDWARD P. DAVIS, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College, Philadelphia, and in the Philadelphia Polyclinic; Obstetrician and Gynecologist to the Philadelphia Hospital, etc. Illustrated. W. B. Saunders & Co., Philadelphia, 1901.

THIS is a general treatise on the subjects named in the title, although the author declares in the preface that the book was prepared for the training schools of the Jefferson and Philadelphia Hospitals. It is written in the author's characteristic flowing style and is easy reading. The following subjects are briefly elaborated: The Nursing of Normal Pregnancy, Nursing in the Complications of Pregnancy, Descriptions of and Preparations for Labor, The Duties of the Nurse During Labor, The Lying-in Period, The Newborn Child and Its Care, The Accidents of Pregnancy, The Accidents of Labor, Obstetric Surgery, Puerperal Sepsis, Feeding of Infants,

Disorders of Infancy, Gynecologic Nursing in all Its Phases, etc.

A nurse of average intelligence who has had a general training will find the book full of valuable hints and suggestions. The nursing requirements of obstetrical and gynecological operative procedures are clearly elaborated and sufficient description of the anatomy of the parts and technic of the operation is given to enable the nurse to do her work intelligently. In the Appendix will be found a concise and suggestive dietary and a valuable guide to the sterilization of surgical supplies and requirements for operation. The book is invaluable to the obstetric nurse and full of suggestion to the general practitioner. Its influence will certainly tend to raise the standard of aseptic obstetric nursing. The book is attractive and instructive. It should be in the hands of every nurse who is aiming to accomplish the best that the science and art of nursing can suggest.

MANUAL OF DISEASES OF THE EAR. By THOMAS BARR, M.D., Lecturer on Diseases of the Ear, Glasgow University, etc. Third Edition, Revised and Partially Rewritten. With 236 Illustrations. James Maclehose and Sons, Glasgow, 1901.

BARR'S Manual is deservedly called into a third edition. The author has adhered to his original plan and with good reason, making few emendations and these to good purpose. Effective use is made of paragraphs with smaller type for subdivisions which could not well be omitted. "The Treatment of Intracranial and Vascular Complications of Purulent Disease of the Middle Ear" and "Malignant Disease of the Middle Ear" are the subjects of two new chapters, the first of which especially was needful to bring the work in touch with the present state of advancement in brain surgery.

The copious index, the bibliography, the profuseness of illustrations, the black line titles to paragraphs and the handy size and completeness of this manual, make it one of the most available of books on the ear for students and one of the most delightful for casual reading.

A MANUAL OF DISEASES OF THE NOSE AND THROAT. By CORNELIUS GODFREY COAKLEY, A.M., M.D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College, New York, etc. Second Edition, Revised and Enlarged. With 103 Engravings. Lea Brothers & Co., 1901.

THIS attractive little manual urges itself into a second edition after the lapse of but two years since the issue of the first. The make-up is excellent in type, leading, illustrations, arrangement, index, etc. The book is not ambitious, making no pretence to fill the place of the several treatises which recent years have given us. It seeks, however, to give in few words the most important salient facts relating to the anatomy of the parts treated and the diagnosis and treatment of their diseases. The new chapter added on Affections in the Respiratory Tract Occurring in the Infectious Diseases partakes of the same elemental character as the remainder of the manual. For students such a work may be all that could be mastered. It is very likely more than the average practitioner is acquainted with in detail. Although it lacks the fulness which one wishes to find even in a manual, it does not lack in freshness and up-to-date methods and facts, and therefore deserves to travel on its merits along with the larger works.

THE ACUTE CONTAGIOUS DISEASES OF CHILDHOOD. By MARCUS P. HATFIELD, A.M., M.D., Professor Emeritus of Diseases of Children, Northwestern University Medical School; Professor of Diseases of Children, Chicago Clinical School; Attending Physician Wesley Hospital. Chicago: G. P. Engelhard & Co., 1901. *Pp.* 135.

As stated in the preface, this handy volume is a "composite" of the various writers on the subjects discussed, especial pains having been taken to embody the views of later French and German pediatricians. The diseases considered are scarlatina, measles, rötheln, parotitis epidemica, pertussis, varicella, variola and la grippe. A brief space is devoted to the history, occurrence, etiology and prophylaxis, but the main portion of the work dwells on the clinical manifestations and types, the pathology and the treatment. By careful selection from the mass of literature, the author has made this a very readable and concise treatise on these important subjects. His own ideas of treatment are outlined, but are always accompanied by a fair statement of the methods employed by other American and foreign authorities. Under scarlatina Class' cocci are described, but very poorly illustrated; and, among other things, salol is given a prominent place in the treatment of smallpox. The book is handsome enough for even a bibliophile, but for the busy practitioner its uncut edges are only troublesome.

BOOKS RECEIVED.

The MEDICAL NEWS *acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the* MEDICAL NEWS *will shortly appear.*

ESSENTIALS OF THE DISEASES OF CHILDREN. By Dr. W. M. Powell. Third Edition by Dr. A. Hand. Saunders' Question Compends. No. 15. W. B. Saunders & Company, Philadelphia and London.

ATLAS AND EPITOME OF OPHTHALMOSCOPY AND OPHTHALMIC DIAGNOSIS. By Dr. O. Haab. Edited by Dr. G. E. de Schweinitz. 12mo. Illustrated. W. B. Saunders & Company, Philadelphia and London.

ECZEMA; WITH AN ANALYSIS OF EIGHT THOUSAND CASES OF THE DISEASE. By Dr. L. Duncan Bulkley. 12mo. 365 pages. G. P. Putnam's Sons, New York and London.

ATLAS OF THE NERVOUS SYSTEM. By Dr. O. Jacob. Edited by Dr. E. D. Fisher. 12mo. Illustrated. W. B. Saunders & Company, Philadelphia and London.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By Dr. H. Eichhorst. In Two Volumes—8vo, each 600 pages. Illustrated. W. B. Saunders & Company, Philadelphia and London.